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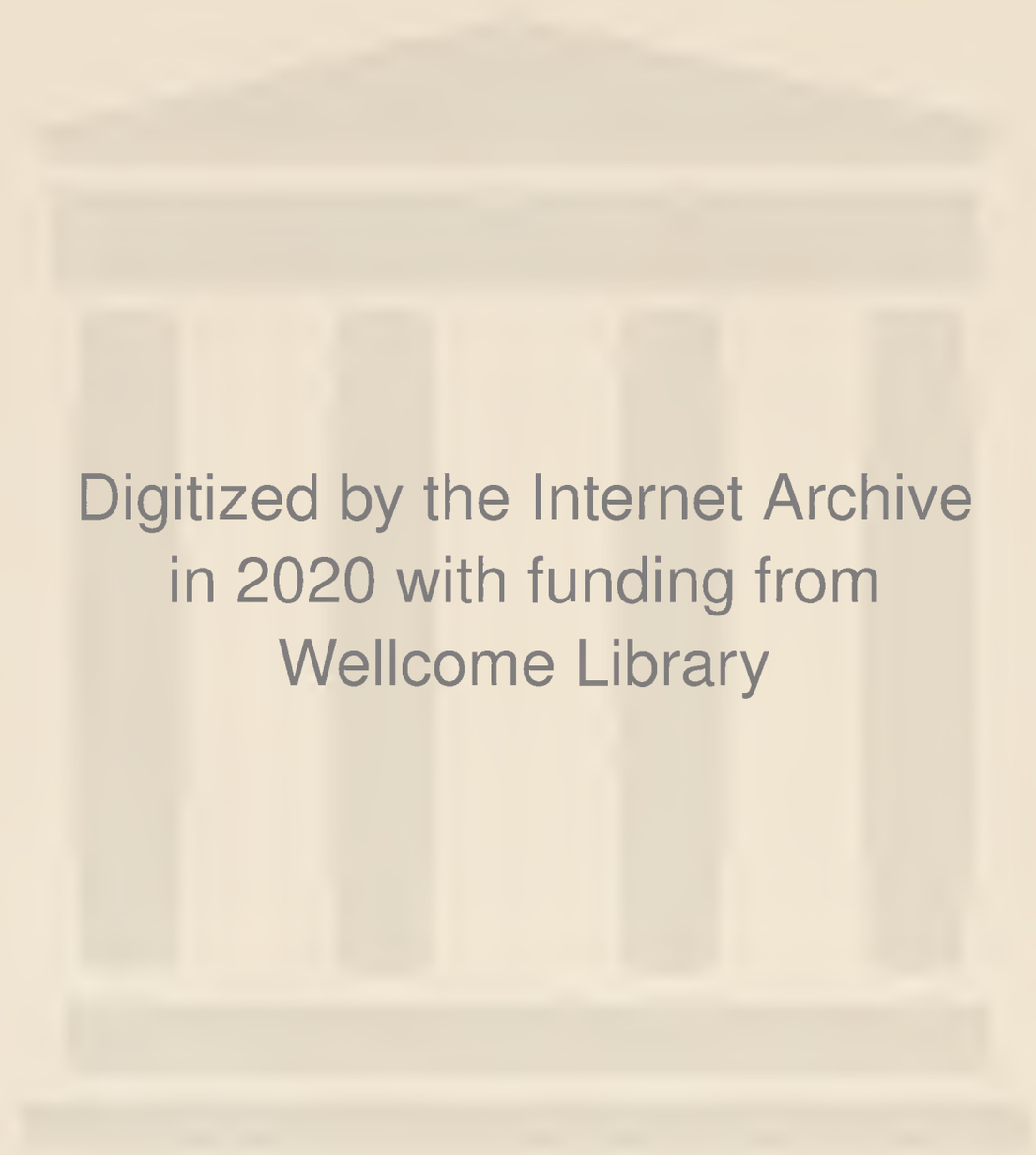
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THE WEEKLY

Medico-Chirurgical Review & Philosophical MAGAZINE.

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" FLORIFERIS, UT APES, IN SALTIBUS OMNIA LIBANT
OMNIA NOS, ITIDEM, DEPASCIMUR AUREA DICTA."

[*Commencing our Third Volume with the New Year, we are compelled, by gratitude as well as inclination, to return our sincere thanks, with the compliments of the season, to our numerous friends and readers, for the very flattering encouragement and general reception which our labours have hitherto experienced from the commencement of the* MEDICO-CHIRURGICAL (REVIEW) AND PHILOSOPHICAL MAGAZINE; *but more particularly within the last six months, which have considerably added to our circulation, by increased demands from various parts of the United Kingdom, &c. &c.*

We have more than once already stated our pretensions, which, though limited, are not restrained; we deem it needless, therefore, to repeat them. We have only to add that, in addition to the usual selections of foreign and domestic Medical Intelligence, a WEEKLY SUMMARY *of passing events, connected with every branch of the profession, will be found in our columns—embracing, among various other features,* NOTICES OF NEW PUBLICATIONS--TRANSACTIONS OF LEARNED SOCIETIES — HOSPITAL REPORTS—OPERATIONS—DISSECTIONS —MILITARY AND NAVAL MEDICAL OCCURRENCES, *at home and abroad*—DEATHS—BIRTHS—MARRIAGES, *&c. &c. &c.*]

MEMOIRS OF SIR ASTLEY P. COOPER, BART.

SURGEON TO THE KING, AND TO GUY'S HOSPITAL, &c. &c.

" No species of writing," observes the author of the Rambler (No. 60), " seems more worthy of cultivation than BIOGRAPHY; since none can be more useful, none can more certainly enchain the heart by irresistible interest, or more widely diffuse instruction to every diversity of condition." To complete, therefore, the full estimate of these axiomatic observations, whether it be in describing the living or the dead, Biography demands the sternest disinterestedness and the nicest discrimination, from which ought to result the most just and impartial conclusions.

It has been well observed, that, in proportion as a country advances in literature and the fine arts, Biography becomes a more interesting inquiry. The philosophers and poets of earlier times had but few contemporaries adequate to the task of furnishing memoirs of importance enough to attract public attention; and from the exalted opinion entertained of the character brought biographically before the public, a faithful record of their lives tended to abstract from rather than to add to their celebrity. In laying, therefore, the following sketch of one of the first and most distinguished surgeons of the age, before our readers, we are aware that much is wanting on our part, under more than one consideration, to do sufficient justice to the genius and talents and exalted moral virtues of so worthy and so estimable a character, as the subject we have selected, whether he may be regarded as the surgeon or as the

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private gentleman. For these reasons, we shall proceed with proper caution; and endeavour, as we advance, to render the task as little arduous and irksome to ourselves as free from hazard and detriment to the character we would wish, as far as the means extend, to illustrate.

Sir Astley Cooper, Bart. was born at North Yarmouth, in the year 1768, of which place his father, (who died at an advanced age, and at a time the highest dignity of the church was about to be conferred on him) was vicar. He is the youngest of three sons, the eldest, Robert Bransby Cooper, Esq., one of the present representatives in parliament for the county of Gloucester; and the other, Lovick Cooper,* deceased, who was brought up to the church, and resided at North Yarmouth, where he enjoyed a living under his reverend father.

Sir Astley commenced his professional studies, for which he had been duly prepared, under Mr. Cline, sen. at that time surgeon to St. Thomas's Hospital, and lecturer on anatomy.

In the year 1791 he was married to Miss Ann Cock, daughter of an eminent merchant in the city, and niece to Mr. Cline, to whom he had now regularly served his apprenticeship, and had become a member of the Royal College of Surgeons.

In the following year, Sir Astley commenced Lectures on Surgery, at St. Thomas's Hospital,† and was, shortly afterwards, appointed demonstrator to Mr. Cline, with whom he soon after became Joint Lecturer on Anatomy.

On the resignation of his uncle, William Cooper, Esq. one of the surgeons of Guy's Hospital, in conjunction with the present Mr. Forster and the late Mr. Lucas, Sir Astley was appointed surgeon, in his stead, to this institution.

(*To be continued.*)

* It is to a daughter of this gentleman that Mr. Key, the present house-surgeon to Guy's Hospital, is married.

† Previous to this period, surgical lectures were not delivered at either of the Hospitals of Guy's and St. Thomas's.

Case of Dropsy of the Ovary, in which that Viscus had distended to an unusual Size. Communicated by Mr. William Cox, Surgeon, St. Thomas'-Street, Borough.

Mary Bradley, aged 66, a single woman, of spare make, and whose habits, in the early part of life, had been irregular, dated the origin of her complaint 35 years since, but could give no other suspicion of its cause, than that she had, some time previous, received a blow on the left side of the abdomen, while in a frolic with some friends. Through the whole progress of the disease, neither her constitution nor her cheerful disposition appear to have been affected.

In 1815, the first time I saw her, the greatest circumference of the body was 2¼ yards—the legs were œdematous and superficially ulcerated. The left arm was also much impaired. With these inconveniences she could still crawl up and down stairs night and morning, and, till within three years of her death, supported herself by attending to a small school.

Some idea may, however, be formed of the magnitude of the tumour, from her inability to see her feet, which she said she had not done for many years. The activity of this woman, even after the complaint had made considerable advancement, was so great, that she had leaped a five-barred gate, and had been, to use her own expression, "always very *lissome.*" A short time before her last illness, the circumference of the body was again taken, and it then exceeded three yards. It was at this pe-

riod impossible to say, from appearance alone, on which side the disease had originated. The bowels were frequently constipated, and the secretion of urine was also diminished. These symptoms were relieved by a mixture of gin and jalap, remedies to which she often applied. Her activity remained undiminished to the last, for she would not be confined to bed till within three weeks of her death, which happened late in September, 1821.

On the following day I endeavoured to obtain permission to inspect the body, but was allowed only to evacuate the fluid, which was accomplished in the following manner. Having made an incision of a few inches in length in the linea alba, the surface of the ovary became exposed. A child's pop-gun, which happened to be in the room, was then introduced into it, and the fluid drawn off, of which 64 *quarts* were measured. From two to three quarts more were allowed for that which escaped into the abdomen and about the bed and the room. This allowance was certainly moderate, so that the whole fluid amounted to 16½ gallons. My attention was now directed to the cyst, which I was anxious to procure, and in which I succeeded, by drawing it gradually through the aperture of the abdomen, which was not larger than would admit the fore-arm. It adhered, excepting at its natural attachment, by but one small band of adhesive matter. Under such unfavourable circumstances it was impossible that I could ascertain the relative position of the other viscera, not one of which could I see, excepting the uterus, which had become prolapsed. The most remarkable appearance, after the removal of the ovary, was the great expansion of the lower part of the chest, caused by the pressure of the tumour between the cartilages of the ribs.

The external surface of the cyst was smooth and polished; its internal irregular, and partially enpymosed, also having the appearance of cicatrization, and covered likewise by adhesive matter of various consistence. The fluid was of a chocolate colour, and contained in one cavity.

The preparation is now in the possession of Dr. Blundell, Lecturer on Midwifery and Philosophy, at Guy's Hospital.

Ovarian dropsy is a complaint of which I have seen three varieties. The first, most common, and to which the name most strictly applies, is where the whole fluid is contained in one cyst. This form is local, unattended with constitutional derangement, and therefore not dangerous.

The second variety is the encysted; that is, the ovary is distinctly divided into several cavities, in which serum is secreted. This likewise is local, and occasions immediate danger. The third, or *gelatinous* form, I have seen two instances of.* These may not, however, by some be admitted as cases of ovarian *dropsy*; but as the symptoms have so nearly coincided with those of the other varieties, as almost to warrant the operation of paracentesis, I think the term dropsy more applicable than any other. In this case the disease is constitutional, rapid, and dangerous.

It is not my intention to prolong these remarks farther, than by shortly stating two or three points for the

* The contents of the ovary are of a yellow, loose, gelatinous character, and intersected by numerous bands, which pass in various directions to the parietes of the cyst. Here fluctuation usually appears more than probable, and has even induced the practitioner to attempt the diminution of the ovary by paracentesis.

consideration of the reader, as to the propriety of urging patients to submit to paracentesis, excepting under distressing symptoms. In *common ovarian dropsy* temporary relief is certainly given; but the disease speedily returns, and the operation has been followed by serious irritation, and even by death.

In the *encysted*, no other advantage (if it be one at all) is gained by tapping, than the knowledge of the form of dropsy. It neither satisfies the practitioner nor relieves the patient, and is exposed to the same unfavourable consequences as the common form.

In the *gelatinous* variety, it is obvious that the tumour must have remained undiminished, and that the danger would be increased in a constitution already impaired by the disease, if the operation were had recourse to.

With these remarks, I leave the consideration of the operation of paracentesis in ovarian dropsy, excepting under alarming and distressing circumstances.

MEDICO-CHIRURGICAL TRANSACTIONS. Vol. XII. Part II.

(Continued from Page 310, Vol. II.)

On the Effects of Stricture in the Urethra, particularly in a sacculated State of the Bladder. By JOHN SHAW, Esq.

Mr. Shaw begins this valuable paper by stating some interesting pathological facts.—

"1st, I have not, in more than a hundred dissections which I have made of diseases of the urethra, seen a stricture or narrowing of the canal, posterior to the ligament of the bulb; nor have I been able to find one example of stricture beyond this part among those preserved in the College Museum."

"2d, In almost every instance where a narrow stricture has existed for some time, in any part of the urethra anterior to the ligament of the bulb, I have found the membranous and prostatic portions dilated to three or four times their natural size."

"3d, The ducts of the prostate, which are naturally very small, are always more or less enlarged when there has been a stricture, or a long continued irritation of the canal."

"4th, When such stricture as causes occasional retention of urine has existed for some years, the bladder is found to be not only thickened, but often at the same time sacculated."

From the first of these it follows, that if our instrument is obstructed at a point posterior to the ligament of the bulb, we ought not to infer a stricture; and hence both from this and the second, we should not, on meeting with such an obstruction, attempt to push the instrument further in. The third might lead to the inference, that the instrument, if obstructed, had passed into one of the dilated ducts of the prostate, which often form a complete labyrinth. The using force in such cases, though recommended even by Dessault, must always be hazardous and improper.

As the healthy urethra becomes suddenly narrow at the bulb, while the curve of the canal suddenly changes, the ligament being higher than the sinus of the bulb, it must follow, in cases of slight inflammation, that spasmodic action will be excited by passing a bougie, the instrument will be obstructed, and lead to the false supposition of a stricture. Besides, when the bougie is obstructed at the bulb, its upper surface may be so cut, or indented, by being pressed against the lower edge of the ligament, as to have exactly the same appearance as that which has been considered as an unequivocal proof of there being a stricture at that point where the instrument has been stopped. Many strictures at the bulb may probably, indeed, have originated in the inflammation consequent upon ineffectual attempts to pass the instrument, while the internal membrane was irritated or inflamed.

Mr. Shaw goes on to infer, that stricture is very frequently followed by sacculated state of the bladder or prostate, often leading to the disastrous consequences of recto-vesical fistula, bursting of the urethra, and sloughing of the scrotum and penis, peritonitis, irritative fever, and death.

In treating such cases, Mr. Shaw, very justly we think, condemns the instrument invented for dilating strictures, as quite useless in cases of difficulty, for many strictures will not permit any thing thicker than a hog's bristle. In the cases in which the dilator might be used, the common means would be no less successful, and more simple. He advises the operation of cutting through the stricture, introducing a catheter from the glans, and endeavouring to make the urethra entire, by allowing the wound to granulate over the catheter. The operation is easy, the delay of it may prove fatal to the patient — a circumstance of daily occurrence in London; and when the stricture is divided, the principal object is attained. The great difficulty of the operation is the existence of false passages, which may be cut down upon instead of the stricture; and in passing the catheter afterwards into the bladder, we may again be misled by other false passages. The worst almost that can happen, is a fistulous sore; but this is known to be much more manageable than spontaneous fistula.

The paper was illustrated by numerous interesting preparations of strictures, false passages, dilated ducts, sacculated bladder, &c. from the Museum in Great Windmill-street.

Mr. Swan, of Lincoln, in a paper giving several cases of injuries of the pelvis, remarks, that

"When the urethra or bladder is wounded, and the bones of the pelvis at the same time are broken, it appears to me that there can be no chance for the recovery of the patient, unless an incision is immediately made to give it a free discharge to the urine; for if any of it is detained, it must destroy the bones, and prevent their union; or, at least, it must give rise to extensive exfoliations. At the same time, any loose portions of bone should be removed, as it is most probable the urine will have prevented their re-union."

Dr. Harry Leake Gibbs, of St. Petersburgh, in the succeeding paper, relates a case of axillary aneurism, in which the operation of tying the subclavian artery was successfully performed, on a strong plethoric cooper, aged thirty-five. The ligature came away on the twelfth day, and the patient was nearly well, and walking about, on the twenty-first day from the operation, the wound being all healed to a small spot in the centre, from which a little lymp was oozing. Pulsation not perceptible, but the arm warm and well nourished; appetite and sleep good.

"The arm and upper part of the shoulder must have been nourished, in the first place, by anastomosing vessels coming from the neck and right scapula; but especially from the extreme branches of the left epigastric, inosculating with those of the left mammaria externa, by which the blood at first returned to the axillary artery below the tumour, and so onwards."

(To be continued.)

On the Cause of Formation of Worms in the Human Intestines. From the German of Bremser, *by* H. S. Hymans, M. D. A. C. M. *of Rotterdam. Communicated by Dr.* W. Philip, *through Dr.* Johnson.

If it be proved that worms do not come from without into the human body, nor are innate with it, and consequently must owe their existence to some preternatural formation, the cause of this formation cannot probably be found in any thing else than in some anomalous quality, or mixture of certain substances, nou-

rishing, either generally or partially, some of the single organs of the body, or in a superfluity of those substances; to which cause, with the same justice as to any other, the said vermi-formation may very well be ascribed. The cause, however, of such an anomalous quality, or disproportion in the nutritive substances, can only be found in a relative debility of some organs, and not in a general one. For, as little as any debility may be called a disease, while the harmony of all animal functions is prevailing, just as little the said debility may be termed a cause of the formation of worms. It is only from a derangement of the functions of some separate organ, that a disease can be formed. The same, then, must take place, whenever any formation of worms shall be effected. If, for instance, in the stomach, the nourishing substances prepared from the food, are congruent with the nutritive secretions; if no more substances be animalized there than the absorbent vessels of the intestinal tube are able to take up, and actually have absorbed; or, on the contrary, if the fluids separated from the animal body itself, agree with the quantity of substances taken up by it, in order to be animalized and become homogeneous with its own mass;—in many of these cases, no vermi-formation will ever occur. But if the contrary takes place, nothing is sooner effected than the aforesaid formation. This, likewise, may account for our often meeting with persons who, if judged from their outward appearance, seem to be quite well, while, notwithstanding this, they are harbouring worms in their intestines. The stomach and bowels, or what are called first passages, in that case seem to be in a condition of higher vitality, than required for the preservation of the organism, and therefore the action of the absorbent vessels, (which merely take up the quantity required to supply the necessarily evacuated secretions, and nothing more,) is not congruent with the former condition; and in this case, the quantity of matter animalized by the digestive organs surpasses that which is absorbed by them; and thus, the remaining animal substance is appointed to form a living matter, or a worm. By this we see, that in a human body, the opportunity to form worms in the intestines, as well as that to other diseases, may either be hereditary, innate, or acquired. Nay, this gives a satisfactory explanation, why children more than adults —women, more than men, are disposed to the vermi-formation. In both, a certain debility of the absorbent vessels is constantly prevailing. It is a well-known fact, that during the first months of life, children, especially those that are not suckled often, do not prosper; or, at least, increase but very little in growth and strength, in spite of the abundance of good nourishing food bestowed on them. Now this is by no means to be always imputed to a want of nutrition in the food taken by them, but merely to the bad preparation of it in the stomach, and to the want of sufficient absorbance of the chyle prepared from it. In scrofulous or atrophic children, the free passage through the absorbent nourishing vessels is stopped, or, at least, considerably impeded; thus a great quantity of chyle remains stagnant in the intestines, in which I not only reckon the substances absorbed from the nutriments taken, but also the mixture of the substances absorbed from them; and, moreover, the mixture of these substances with the fluids of the body: in a word, a fluid already animalized, if not evacuated by stool, in the same manner as the usual secretions, easily pro-

ceeds to a formation of worms. Children of this description, as it is evident by appearance, are commonly affected with worms.

This explanation of the vermi-formation, according to my opinion, comes much nearer to reality than the doctrines of Ætius, Ægineta, Riolans, and Cabulinus; who suppose the tapeworm to be nothing else than the loosened inner skin of the tenuiora, gone over to an enlivened body. Similar theories are still to be met with in the present age. If, however, under the aforesaid conditions, worms are formed, this does not at all imply that wherever these conditions exist, worms must be found. This assertion, likewise, would be contrary to all experience; for it is frequently remarked, that all of the above-mentioned circumstances take place; nay, very often all the phenomena, by which we may think ourselves fully entitled to conclude the existence of worms, present themselves to our observation, where no worms may be existing. The cause of this occurrence is easily found, being undoubtedly no other than this; that the said condition only forms the one factor or the progenitor of worms, and indeed, the only one, that lies under the reach of our contemplation. This we may call the substantial factor; the other, which I beg leave for a while to call the spiritual one, is situated far beyond the region of our investigations. Its co-operation, however, is unavoidably required, whenever, out of the shapeless animalized matter, a new animal—a worm, shall be formed. To aspire to a more peculiar knowledge of this second factor,—although it be no other than the all-vivifying spirit, reigning throughout the universe, and, therefore, even already present in the shapeless animalized matter, though not with the required tension to create original individual life, will always, in our present state of existence, remain a foolish attempt. It is only by its effects that we are led to ascertain its presence.

Among the more remote causes of the vermi-formation, we may, in the first place, chiefly reckon a sedentary, inactive way of life, or any other which requires little or no exertion of muscular strength; secondly, wet, damp habitations; victuals out of which a tough, slimy, or rich chyle is prepared in the stomach; and especially the frequent use of fat, mealy, and milky food.—Feuillee considers the abundant use of sugar to be the cause of the more frequent formation of worms among the Indians. A sedentary way of life, most probably, is one of the remote causes why the formation of worms is more frequently found in women than in men. Another still greater disposition to this formation, proceeds from a constant abode in a damp habitation, which, by the suppression of free perspiration, is prejudicially operating on the functions of the absorbent vessels in the bowels. If, then, finally, the food is of such a quality as to forward the formation of worms, the means for this formation, at least on the side of the substantial factor, are completely afforded. It is a fact, that among sheep, the formation of liver-worms is caused chiefly by the pasturing of these animals on marshy grounds; and hence, in well-managed sheep-folds, shepherds are brought before a court of justice, whenever this or a like disease creeps into a flock; since, in such cases, either their having been pastured on wet grounds, or their having, during the winter, been fed upon muddy, not well cleansed fodder, almost to a certainty may be concluded upon. During wet seasons, however, the said complaint, without any fault of the

shepherd, causes great ravages among the sheep, and it is only by a prompt administration of better food and corroborative remedies, gentian, acorns, &c., that its further progress may be in some measure restrained.

(To be continued.)

R. PHILLIPS, F. R. S. &c. *on the Methods of employing the various Tests proposed for detecting the Presence of Arsenic.*

Mr. Phillips's object on the present occasion is not to offer any new test for arsenic, but to modify some of the methods of using the means already known, and to simplify their application; confining himself to treating of the mode of employing the following tests, viz. the reduction of the arsenious acid to its metallic state; the use of sulphuretted hydrogen; sulphate of copper and nitrate of silver, with the little apparatus required, in such a manner as to remove some ambiguity and difficulty.

Dr. Paris (Jurisprudence, vol. ii. p. 252), has justly observed, that, "the detection of the presence of arsenic amidst a complicated mass of alimentary matter has long been a problem of interest and difficulty," because "coloured fluids are capable of obscuring and changing, and even altogether preventing the arsenical indications." He (Dr. P.) then adverts to the proposal of M. Orfila to destroy or modify the colouring matter by means of chlorine; this method is justly stated to be liable to great difficulties in its application, and from sources too obvious to require notice. Dr. Paris, therefore, advises that a solution of ammoniuret of silver should be added to the fluid, to precipitate indiscriminately all bodies which it may be capable of so affecting; and then subjecting the precipitate to the action of black flux in a glass tube, for the purpose of subliming the arsenic in its metalic state.

"On considering this part of the subject, it appeared to me that animal charcoal (ivory-black) might be advantageously employed for destroying the colouring matter. I therefore mixed some of it with a coloured solution of arsenious acid, viz. the *liquor arsenicalis* of the London Pharmacopœia. I found that the colouring matter was so completely destroyed in a few minutes, that the test of nitrate of silver, or any other, might be readily applied. I repeated this experiment with port wine, gravy soup, and a strong infusion of onions,* and succeeded in these cases in procuring a solution sufficiently colourless for the application of the most delicate tests. It might be supposed that the phosphoric acid which the animal charcoal contains, might have some share in the production of the yellow precipitate with silver; I found, however, that water or wine, which was merely digested on the animal charcoal, produced no effect with the nitrate of silver, excepting a slight precipitate of chloride; and to prevent this, the ivory-black should be washed in a filter with boiling distilled water, till the fluid running through ceases to be affected by nitrate of silver. If, however, the ivory-black is of good quality, this precaution is unnecessary."

Of Sulphuretted Hydrogen.—Supposing the substance suspected to contain arsenious acid, to have been boiled in distilled water without any alkali, and deprived of its colouring matter as now described, the test to which it may at first be subjected is a solution of sulphuretted hydrogen gas in water. This is to be preferred

* I particularly mention infusion of onions, because much stress has been laid upon the ambiguity which its yellow colour may occasion. It immediately becomes colourless. (See Paris and Fonblanque's Med. Jurisprudence, vol. iii. p. 199.)

to any coloured fluid containing sulphuretted hydrogen, such as the hydrosulphuret, or, perhaps more properly, hydroguretted sulphuret of ammonia; for this fluid possesses the colour when diluted, which we expect to produce by the action of sulphuretted hydrogen upon arsenious acid. The method of preparing this solution of the gas is perfectly simple. Put into an oil-flask about two ounces of muriatic acid undiluted with water, and an ounce and a half of powdered sulphuret of antimony; fit a cork to the flask, and pass through it the shorter leg of a small hollow glass tube, twice bent at right angles; pass the longer leg of the tube into a vial containing distilled water, and then by the heat of a spirit-lamp applied to the flask, sulphuretted hydrogen gas will be readily procured, and though much of it will escape, yet a sufficient quantity will be dissolved by the water. If distilled water cannot be procured, then rain water may be used, or if that be not at the moment obtainable, water, which has been boiled and become clear, must be substituted.

If a glass tube is not at hand, one may be readily formed of tin-plate soldered. I have employed one for the purpose of trying the experiment, which was made in about an hour; the shorter leg may be about two inches and a half to three inches long; the intermediate space and the longer leg, each six inches in length; the diameter may be about one-fourth of an inch; this passed through the cork, and used instead of the glass one, answers the purpose perfectly, notwithstanding the tin is slightly acted upon by the gas during its passage, and by the solution in which it is immersed.

To this solution, clear and colourless, add, in a wine-glass, or vial, some of the suspected fluid; if it contain arsenious acid, a yellow-coloured fluid will be produced, and, after the lapse of some hours, a yellow precipitate will fall down. It has been objected to this test, that antimony produces a similar appearance; while, however, there exists some resemblance in the colours, there are these differences in the effects; antimony furnishes a precipitate immediately, and with more of an orange tint.

Sulphate of Copper.—Arsenious acid produces no effect upon a solution of a sulphate of copper; but with the assistance of an alkali, a green precipitate of arsenite of copper is readily produced. It has been objected to this test, that a fallacious appearance is produced if the suspected solution be of a yellow colour; but for this case I have already provided. If the sulphate of copper be impure, owing to the presence of peroxide of iron, a greenish precipitate may also be obtained by simply adding potash to the solution. This test may be employed in two ways; first, add a few drops of an alkaline solution, as potash or its *sub*-carbonate to the suspected solution, and when mixed pour them into the sulphate of copper. If arsenious acid be present, a green precipitate will be formed; and there is a mode of removing any ambiguity which, if it does not escape my recollection, has not been previously noticed. To be certain that the sulphate of copper contains no peroxide of iron, add first to the solution some potash; if pure, a fine blue precipitate will be obtained; to this add the suspected solution; and if arsenious acid be present, then it will convert the blue precipitate to a green one.

Nitrate of Silver.—To confirm the results obtained by sulphuretted hydrogen and sulphate of copper, nitrate of silver is a test which may be

very usefully employed. The first method is simply to add the suspected solution to one of nitrate of silver, which should be prepared either from the crystallized or fused nitrate (lunar caustic), in order that all excess of acid may be avoided. After the suspected solution has been mixed with that of silver, drop in a solution of ammonia or potash, liquor ammoniæ, or liquor potassæ of the London Pharmacopœia; if arsenious acid be present, a bright yellow precipitate of arsenite of silver will be formed, which is readily dissolved by excess either of ammonia or nitric acid; so that supposing too much ammonia to have been employed, nitric acid will restore the precipitate. Potash does not possess the inconvenience of ammonia in redissolving the arsenite of silver formed: but there is one inconvenience attending the use of silver; the animal fluids all contain muriatic salts; and, therefore, the fluid contents of the stomach will probably give a white precipitate of chloride of silver when mixed with the nitrate. If, however, the presence of arsenic has been determined by the use of the preceding tests, then the chloride and arsenite of silver must be precipitated together, and the mixture, after being dried, must be subjected to the metallizing process, to be described presently.

(*To be concluded in our next.*)

HEADS *of* SURGICAL LECTURES, *delivered by* SIR A. COOPER, Bart. *at* ST. THOMAS'S HOSPITAL.

(Continued from page 367, Vol. II.)

OPERATION FOR POPLITEAL ANEURISM.—"Since the time of Mr. John Hunter, several slight alterations in the mode of operating for popliteal aneurism have been made, but the principle established by him remains the same; and that great surgeon has the undisputed merit of having substituted a simple and beautiful operation, for one of very considerable difficulty and danger.

"Mr. Hunter used to make the incision in the middle of the thigh, but experience has shewn that it is better to make it one-third of the space downward from the ilium to the internal condyle of the os femoris, because the artery is more deeply seated in the middle of the thigh than it is higher up; besides, there are many anastamosing vessels in the former situation.

"There are four steps in this operation—1st, An incision through the skin, which exposes the sactorius muscle. 2d, The division of the inner edge of the sactorius, exposing the sheath containing the femoral artery, vein, and nerve. 4th, Putting the ligature round the vessel.

"The operation then is performed in the following manner—make an incision about four inches in length, about one-third of the thigh downward from the ilium, which will expose the sactorius; the inner edge of which is now to be separated from the parts with which it is in contact, which will lay bare the sheath, exposing the artery and vein, between which there is a little septum which should be divided: introduce the aneurism needle under the artery, with as little disturbance as possible, to the parts, separate the cellular membrane to about the extent of an inch, and take care not to include the vena saphena in the ligature; which, if taken up, may be known by the irritability which is immediately occasioned.

"Having passed the ligature under the artery, by means of the aneurismal needle, tie it with what is called a surgeon's knot—in these consist the whole operation.

"Should you have separated the artery from the sheath to any considerable extent; it will be necessary to apply two ligatures close to the

cellular membrane, but should the artery not have been much disturbed, one will be sufficient."

January 5th, 1824.—Sir Astley commenced this evening's lecture by observing, that he should allude to a point or two on the subject of the cure of aneurism, which he had omitted to do in the preceding lecture: First, It has been conceived that much may be done by means of medical treatment in retarding the progress of aneurism. This has more than once been attempted by using means to diminish the force of the circulation, which indeed does not at first sight appear improbable. A person with an aneurism of the aorta may live a year or two by observing a strict regimen, and having recourse to occasional bleeding; but, by being kept too low, the patient ultimately becomes exhausted by the subsequent irritability. In these cases, although the momentum of the circulation may evidently be lessened, yet the quickness induced by it more than compensates for the apparent advantage. If we diminish action in force, we increase it in velocity.

"The second point is the degree of probability of preventing the operation by pressure on the aneurismal sac; experience however teaches us, that all such means are chimerical. Nature sometimes performs a spontaneous cure; but the idea of compressing an artery to cause it to adhere, however feasible it may appear, is impossible in practice. We may, therefore, abandon all hope of giving the patient relief by such means.*

"Several projects have been attempted for the improvement of the operation for popliteal artery. Mr. Hunter used a broad ligature.—Mr. Abernethy uses two ligatures, and divides the artery between them. The first produces too much irritation—in the latter, there is a danger of the ligatures slipping off; four instances of which have come within my own knowledge. One happened to Mr. Cline, sen. in this hospital, and in a case of popliteal aneurism it happened to myself.

"It was found by Mr. Jones,† that if a very fine ligature were passed round an aneurism, without wounding the external coat, that, by completely dividing the middle and internal coats, it might be immediately removed without risk, as it would render the artery impervious. This, however, is a mode of operating that must never be trusted to, &c. A ligature capable of being dissolved, and afterwards of being absorbed, is a most desirable object in the tying of arteries.

Sir Astley here observed, that Dr. Physick, of Philadelphia, had used, for this purpose, the untanned skin of ———, and that it had once succeeded. Sir A. himself, has used a catgut ligature in a patient eighty years of age. The wound, he observed, healed kindly, and the man got well—but he has not found it, on repetition, to be superior to a common ligature.

"With respect to cutting the ligature close to the knot, Mr. Hunter once did it, but had afterwards reason to regret having done so, as it produced considerable irritation, &c. The best method is to use a fine ligature, disturbing the artery as little as possible, cutting one of the ends close to the knot, and leaving the other hanging out. Do not use a broad ligature on any account—

* Sir Astley alluded to a machine for compressing the femoral artery, in case of popliteal aneurism. It was used by Sir W. Blizard; for an account of which, see *Med. Phys. Journal*, vol. 8., or Cooper's *Surgical Dictionary*, page 104.

† See Jones on hemorrage—a work that ought to be found in the library of every gentleman of the profession.

bring the edges of the wound in contact; and do not cover them entirely with the adhesive plaster, but leave interstices between them. Do not apply a bandage over them —keep the limb in the semi-flexed position, with the leg inclined outwards;—placing the limb upon the heal is not a good position. Be upon your guard in preserving due warmth, as gangrene in the colder seasons is liable to attack the foot, &c. For this purpose, warm flannel, or woollen stockings, or, if necessary, bottles of warm water, may be used.

" After the operation for popliteal aneurism, the circulation is carried on in the limb by means of the arteria profunda. The sciatic nerve supports the vessels carrying on the new circulation—these anastamose at the knee with the branches of the anterior tibial artery, &c.

" The ligature separates generally from the 12th to the 14th day; subject however to variation. Sir A. has known the ligature only come away on the 28th day after the operation—but then a broad ligature had been applied—and again on the fifth day, but then the artery had previously been inflamed. Although the ligature may come away without hemorrhage, the patient is not safe. The greatest caution becomes necessary at this period, to prevent the parts from being disturbed.

" A ligature on the femoral artery cures aneurisms of the anterior and posterior tibial arteries—not so with those which occur on the foot; it then becomes necessary to tie the aneurismatic vessel both above and below the tumour.

Jan. 7th.—Operation of tying the external iliac.—Sir Astley's mode of operating is as follows:—he makes the incision about an inch above the abdominal ring, in a semi-lunar form in a line with Poupart's ligament terminating it at an inch and a half at the inner side of the ilium. This lays bare the tendon of the external oblique muscle. The second incision divides this tendon, which exposes the internal oblique. There is now no further occasion for the use of the knife; the finger is to be introduced above Poupart's ligament, for the purpose of raising the external oblique and transversalis muscles, when the space is met with where the spermatic chord quits the abdomen; and here the pulsation of the artery is distinctly felt. The vein is situated to its inner side —that is, the artery lies on the iliac; the vein on the pubic side. The course of the epigastric artery, is on the inner side of the incision. If the artery has been much disturbed, two ligatures should be applied. The anterior crural nerve, which should be avoided in the ligature, is situated in the same sheath with the artery.

A preparation was here exhibited, in which the circulation had been renewed, after the external iliac had been tied.

After the external iliac is tied, the circulation is carried on first and principally by the gluteal artery;—secondly, but with much less power, by the ischiatic artery; the obturator artery also assists, &c. &c.

Operation of tying the internal iliac artery. — This operation consists in making a semi-lunar incision on the inner side of the spine of the ilium, cutting through the abdominal muscles, down to the peritoneum, which is to be turned up. The ureter, which must be carefully avoided, passes directly over the junction of the external with the internal iliac arteries.

There are several histories of the obliteration of the aorta. A gentleman in Dublin presented Sir Astley with a specimen, where the aorta was obliterated within the cavity of the abdomen. The circulation was

carried on by the lumbar vessels. Sir Astley has tied the aorta of several dogs, and they have lived after the operation. And a man, on whom he performed the same, lived forty hours after the operation. The mode of operating on the aorta, is by commencing an incision about two inches above the navel, which is to be avoided by passing round it, and carrying down the incision on the linea alba below it, &c.

Operation for tying the subclavian artery.—The clavicle forms the boundary at this part of the neck, where the subclavian artery is situated. Begin your incision about an inch and a half from the sternal end of the clavicle, so as to make the middle of the bone the centre of it. In the middle of this cut, the internal jugular vein will be discovered, and underneath it the axillary plexus of nerves, lying above the artery, which will be found emerging from the chest, between the scaleni muscles. In performing this operation, Mr. Key found it very useful to divide the clavicular portion of the sterno-mastoid muscle, this afforded such facility to the operation, that no other means were necessary to passing the ligature than the common aneurism needle.

The circulation, after a ligature is placed on the subclavian artery, is carried onward to the arm by the superior scapular artery, &c.

Brachial artery.—This artery is rarely required to be tied for aneurism, but frequently from wounds of the artery, at the elbow-joint, in bleeding. It ought, invariably, to be tied at the middle of the arm, and never at the bend of the elbow. The brachial artery is accompanied by the median nerve, close by its side. The incision is made on the inner side of the biceps muscle, &c.

Ulnar artery.—This vessel requires occasionally to be secured for wounds of the superficial palmar arch. The direction for cutting down upon it is the tendon of the flexor carpi ulnaris, on the inner side of which it lies.

Radial artery.—This artery is exposed by laying bare the tendon of the flexor carpi radialis, and cutting down on the radial side of it.

" Compression to arrest arterial hæmorrhage, is a dangerous step, is attended with considerable hazard, and leads to violent inflammation and gangrene, &c.

Carotid artery.—The practicability of the safe application and removal of a ligature on this artery has been long put beyond a doubt.*

Mode of operating.—An incision is to be made opposite the centre of the thyroid cartilage to within an inch of the clavicle, on the inner side of the sterno-cleido-mastoideus, the margin of which being turned aside, the omo-hyoideus comes into view crossing the sheath containing the vessels, and also the descendens noni. In separating the sterno-cleido-mastoideus from the omo-hyoideus, the jugular vein is seen, which, from its

* The carotid was successfully tried by Sir Astley Cooper, in June, 1808, on a person of the name of Humphries; and by Mr. B. Travers, of St. Thomas's Hospital, on a woman who laboured under an aneurism, by anastamosis, in the left orbit, by which the eye had been protruded from its socket, accompanied by distracting headaches: two small round ligatures were applied, but the artery was not divided—the ligatures separated on the 21st and 22d day, without hæmorrhage, or any alteration in the functions of the brain, and the tumour was absorbed. These two cases set the practicability of the operation beyond a doubt. To render success more certain, it is advised to adopt the operation early and before the tumour has increased to any considerable size, so as to affect the œsophagus or trachea.

If both carotids were tied, the circulation would be carried on by means of the superior and inferior thyroideal and vertebral arteries; this, however, we have not hitherto heard of having been attempted.

vacillating motion, which is increased in respiration, is liable, without great care, to be wounded, presenting the greatest difficulty in the operation. A finger for this purpose is introduced into the wound, to keep the vein out of the way, under which the carotid lies. The greatest care must be taken not to include in the ligature the par vagum, which is situated immediately between the vein and artery, a little to the outer side of the latter, as such a mistake would be attended with the most serious consequence; the recurrent nerve should, in like manner, be avoided, &c. &c.

PROCEEDINGS OF PHILOSOPHICAL SOCIETIES.

(Continued from page 382, Vol. II.)

Royal Society. — *Nov.* 27. — Dr. D. Cresswell and Prof. Barlow were admitted Fellows of the Society; and the reading of Dr. Jenner's paper was concluded.

Dr. Jenner had intended to present this paper to the Royal Society himself, but was prevented from fully completing it, as to arrangement, by his extensive correspondence on the subject of vaccination. It commences with some general observations on the migration of birds, and particularly with respect to their capability of taking such great flights as migration must require, and which some writers have questioned. Dr. Jenner brings forward various facts, to show that there are no grounds for such doubt; among which are the following: a hobby-hawk was seen in a vessel near Newfoundland; and an owl, seemingly the common brown owl, flying above the Atlantic wave, with as much agility as if pursuing a mouse in the fields; cuckoos, snipes, and other birds, have likewise been seen in the Atlantic; a flock of birds resembling linnets settled on the rigging of a ship, remained awhile chirrupping in concert, and then flew away; geese have been caught in Newfoundland, with their crops full of maize, a species of corn which is not grown but at an immense distance from that island. The discussion of this branch of the subject is succeeded by some remarks on the faculties of discrimination and guidance which must be exercised by birds, in the long flights thus taken, and which, Dr. J. conceives, must be of some peculiar and unknown nature; pigeons, it is observed, which have been taken several hundred miles, completely secluded from the light, by being shut up in a box, will, when set at liberty, immediately return to the place whence they were taken. The periodical disappearance and return of birds has been ascribed to hybernation, but of this Dr. Jenner never witnessed an instance; nor could he ever obtain any satisfactory evidence of it. When birds appear for the season, they are never in the emaciated and weakened state, attended with loss of fat, seen in hybernating quadrupeds when they quit their retreats; but, on the contrary, they are quite vigorous, and as active as at any period. With regard to the supposed immersion of birds in ponds and rivers for the winter, Dr. J. remarks, that their respiratory organs are very similar in structure to those of quadrupeds, and are no better adapted for performing their functions under water. He took a swift about the 10th of August, or on the eve of its departure, and held it under water, when it died in two minutes. It has been conjectured, that repeated alternate immersions and emersions might have the effect of altering the corresponding action of the heart and lungs; but though swifts and martins, it is observed, in reply to this conjecture, frequently splash in the water over which they are skimming, yet they never immerge themselves in it, and indeed if they were to do so, their wings would become so wet as to prevent their flying. The common duck, when pursued and forced to dive repeatedly, by a water-dog, arrives at the surface again much exhausted; as is likewise the case with grebes and auks, after repeated diving. Dr. Jenner had been in the habit of receiving Newfoundland dogs from that country, and had ascertained that they never continued under water for more than thirty seconds, and even then seem confused when they came up. It had been asserted, that negro and other divers remained under water several minutes; but Dr. J. conceives this assertion to be grounded only on a vague guess, and that the time was not measured by a stop-watch.

The next division of the paper relates to the remarkable effect of instinct in birds, of their returning to build on the same spot for many successive seasons. The author took twelve swifts from their nests in a barn, indelibly marked them all, by taking off two claws from one foot of each, and then set them liberty. Some of them were caught on the same spot, at the expiration of a year, and others after two years had elapsed; they were not attended to afterwards, but at the expiration of seven years, from their original capture, one of these marked swifts was brought in by a cat.

Dr. Jenner next proceeds to state, as the cause of the migration of birds, that the tumid and enlarged state of the testes in the male, and of the ovaria in the female, at the season of their departure, prompt the animals to seek those countries where they can obtain proper succours for their offspring;—that, in fact, the nestlings are the objects of this provision. The parent birds leave the countries they migrate from at a time when their own wants are completely supplied; and they remain in those to which they migrate, no longer than suffices for the rearing of their young. Thus the swifts arrive in this country about the 5th or 6th of April, and depart hence about the 10th of August.—Dr. Jenner here observes, as a remarkable circumstance, that Ray, who attributed the migration of fishes to its true cause, that of seeking proper situations for spawning, overlooked the corresponding impulse as actuating birds.—The martins leave this country successively, some continuing to rear a brood much later than others; many of these birds roost in the walls of Berkeley Castle; and Dr. Jenner found, by dissecting a number, taken at the same time, that the ovaria of the females were in a variety of states; in some the eggs being no bigger than hemp-seed, while in others they were as large as peas; the testes of the males exhibited analogous degrees of tumidity.

Swallows are seen flying over pools and waters in spring, in search of the gnats, on which they are then obliged to feed; and not because they have arisen from the waters. Their usual food, like that of swifts and martins, is a species of scarabæus, as the author ascertained by dissection.

Birds that rear several broods in the season, frequently leave the last to perish; thus a pair of swifts, that had brought up three broods in one nest, left the fourth to perish; and the mother came back in the following year, threw out the skeletons, and laid in the nest again. Many nests of late birds, of various species, are deserted in this manner by the parent animals; but the latter thus leave the country when it abounds with their own food.

The young birds, it is remarked, cannot be directed in their migratory flights by the parents, but must be guided by some unknown principle: if it be admitted in the case of swifts, martins, and other birds associating together in flocks, that the young may be directed by the motions of their fellows, yet this cannot be the case with the nightingales, nor with the cuckoos, who, though reared in the nests of many different birds, are regular migrators. The parent cuckoo has left the country before its young are reared, always departing early in July.

Dr. Jenner next gives some particulars relative to the enlargement of the testes and ovaria in birds, supplementary to those which have been pointed out by Mr. John Hunter. In those birds who pair but for a short time the testes are small, while in those with whom the connubial compact is of long continuance, they are large. In the cuckoo, a polygamist, and who continues with the female but for a very short time, the testes are of the size of a vetch only; but in the wren, whose attachment to his mate extends from spring to autumn, they are equal to a pea in magnitude; thus much larger in the latter than in the former, in proportion to the size of the bird. A continued supply of generative power is required in birds who pair for a long time, in case the brood should be destroyed—but in those like the cuckoo this provision is unnecessary.

(To be continued.)

Price Current of East India Produce for December, 1823.

	£	s.	d.		£	s.	d.
Cochineal .....lb.	0	3	6	to	0	4	6
Coffee, Java ..cwt.							
——— Cheribon...	3	15	0	..	4	5	0
——— Sumatra....	3	12	0	..	4	0	0
——— Bourbon ...							
——— Mocha	5	0	0	..	8	0	0
Cotton, Surat...lb.	0	0	6	..	0	0	8
——— Madras....	0	0	6	..	0	0	7
——— Bengal	0	0	6	..	0	0	7
——— Bourbon ..	0	0	10	..	0	1	3
Drugs, &c. for Dyeing.							
Aloes, Hepatica cwt.	12	0	0	..	25	0	0
Anniseeds, Star..	4	0	0	..	3	0	0
Borax, Refined	3	0	0	..	2	15	0
——— Unrefined or Tincal	2	5	0	..	2	15	0
Camphire unrefined	9	0	0	..	8	10	0
Cardemoms, Malabar .....lb.	0	2	7	..	0	3	3
——— Ceylon	0	0	10	..	0	1	3
Cassia, Buds cwt.	16	10	0	..	17	0	0
——— Lignea....	7	11	0	..	7	14	0
Castor Oil....lb.	0	0	9	..	0	2	0
China Root cwt.	1	15	0	..	2	0	0
Coculus Indicus	3	0	0	..	2	15	0
Columbo Root ..							
Dragon's Blood .	9	0	0	..	26	0	0
Gum Ammoniac, lump	7	0	0	..	9	0	0
—— Arabic	5	0	0	..	6	0	0
—— Assafœtida	3	0	0	..	12	0	0
—— Benjamin..	3	0	0	..	5	0	0
—— Animi cwt.	3	0	0	..	10	0	0
—— Galbanum ..							
—— Gambogium	14	0	0	..	15	0	0
—— Myrrh	7	0	0	..	18	0	0
—— Olibanum..	2	10	0	..	4	10	0

					£	s.	d.
Lac Lake ....lb.	0	0	9	..	0	2	0
—— Dye	0	3	0	..	0	5	6
—— Shell, Block	2	0	0	..	3	0	0
—— Shivered. ...	2	5	0	..	5	0	0
—— Stick	0	15	0	..	1	10	0
Musk, China..oz	0	6	0	..	0	15	0
Nox Vomica cwt.	1	5	0	..	1	10	0
Oil Cassia.....oz.	0	0	8				
—— Cinnamon ..	0	12	0	..	0	9	0
—— Cloves	2	0	0				
—— Mace.....	0	1	0				
—— Nutmegs	0	2	0	..	0	2	6
Opium .....lb.							
Rhubarb	0	1	6	..	0	5	3
SalAmmoniac cwt.	4	10	0	..	4	15	0
Senna.....lb.	0	0	6	..	0	2	6
Turmerick, Java, cwt.	2	0	0	..	2	15	0
—— Bengal	1	8	0	..	2	14	0
—— China	2	10	0				
Zedoary							
Galls, in Sorts....	7	0	0				
—— Blue.....	7	10	0	..	8	15	0
Indigo, Blue....lb.							
—— Purple and Violet.....	0	8	7	..	0	8	9
—— Fine Violet							
—— Good Ditto.	0	8	0	..	0	8	9
—— Fine Violet and Copper	0	7	0	..	0	7	6
—— Good Ditto.	0	8	0	..	0	8	6
—— Ordinary do.	0	7	0	..	0	7	6
—— Consuming qualities	0	5	0	..	0	6	0
—— Madras, fine and good	0	5	9	..	0	8	5
Rice, Bengal..cwt.	0	10	0	..	0	11	0
Safflower.....	14	0	0	..	16	0	0
Sago	0	16	0	..	1	4	0
Saltpetre, Refined	1	6	6				
Silk, Bengal Skein, lb.	0	13	1				
—— Novi.....	0	14	1	..	1	1	3
—— Ditto White..	0	14	1	..	1	0	5
—— China	0	18	1				
—— Organzine...	1	10	0	..	1	16	0
Spices, Cinnamon,lb.	0	6	7	..	0	6	8
—— Cloves	0	3	10	..	0	4	0
—— Mace.....	0	4	10				
—— Nutmegs ..	0	3	5	..	0	3	6
—— Ginger cwt.	0	17	0	..	1	0	0
—— Pepper Bk.	1.						
—— —— White	0	1	1	..	0	1	4
Sugar, Yellow cwt.	1	7	0	..	1	9	0
—— White	1	10	0	..	1	16	0
—— Brown	1	0	0	..	1	3	0
—— Manilla and Java	0	18	0	..	1	0	0
Tea, Bohea ....lb.	0	2	4	..	0	2	5
—— Congou.....	0	2	6	..	0	2	7
—— Souchong	0	3	9	..	0	4	9
—— Campoi.....	0	3	3	..	0	3	10
—— Twankay	0	3	5	..	0	3	8
—— Pekoe	0	5	3				
Tea, Hyson Skin ..	0	3	4	..	0	3	11
—— Hyson	0	3	9	..	0	5	11
—— Gunpowder ..							
Tortoiseshell.....	1	12	0	..	2	5	0
Wood,Saunders Red ton	9	0	0	..	10	0	0

(To be continued Monthly.)

RESIGNATIONS AT GUY'S HOSPITAL.—Mr. Forster and Mr. Lucas, Surgeons.

In the Medical Department, Dr. Laird, who is succeeded by Dr. Bright.—The successors to the former will be published in our next.

MARRIED.

At St. Mary-le-bone, Thomas Jackson, Esq., Surgeon, R. N. to Isabella, youngest daughter of R. West, Esq., of Edgware-road, Cumberland-gate.

DIED,

On the 21st ult., Dr. John Rogerson, of Wamphray, first physician to the Emperor of Russia.

TO CORRESPONDENTS.

Perhaps SURGEON ODLING *himself may favour us with the Broad Wall Case of* ASTHMA. *We shall defer publishing M. M.'s remarks on the* post mortem *appearances, with this view, for a week or two longer.*

"RICARDUS'S" *Eulogia should have been made known in other quarters: we puff nothing ourselves, directly or indirectly, nor do we much admire those who do.*

R. R. *is received.*

All papers, &c. forwarded us, but not inserted, or otherwise noticed, since November last, if not claimed within the present month, will be forthwith destroyed.

OBITUARY EXTRAORDINARY. — *Expired, towards the close of the last year, of the complicated disorders, known to farriers by the names of* gripes *and* frets, *after a severe struggle, in Windmill-street, The* "MEDICAL INTELLIGENCER," *a production as dull and monotonous as it was unprofitable and obscure. Although the periodical in question had contrived, under the most excruciating tortures, to keep its head up above two years, it was, during its puny existence, as little known or read by the medical profession, as it is now missed or lamented.*—De mortuis nil nisi bonum.

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THE WEEKLY

Medico-Chirurgical Review & Philosophical MAGAZINE.

No. L.] SATURDAY, JANUARY 17, 1824. [*Price* 4*d*.

" FLORIFERIS, UT APES, IN SALTIBUS OMNIA LIBANT
OMNIA NOS, ITIDEM, DEPASCIMUR AUREA DICTA."

GURNEY'S LECTURES, &c. &c.—*A Course of Lectures on Chemical Science, delivered at the Surry Institution by* GOLDSWORTHY GURNEY. 1823. *Price* 13*s*. *Boards. Whittaker and Co.*

This course of lectures was delivered, in the Theatre of the Surry Institution, for the *simple purpose* of instruction and amusement; but we think we shall be able to shew, that Mr. Gurney has rather embraced the opportunity of broaching new and individual theories and opinions, than followed the line chalked out for him by the managers of that establishment, however much his audience may have been disappointed by the *cursory manner* in which he has treated the plain facts and outlines of the science of chemistry, which certainly was not much calculated to initiate novices into the mysteries of the docimastic art, we do not feel disposed to quarrel with him on that account, because we are free to confess, we have received much pleasure, and some information, from the perusal of his book; but we at the same time think, he might have laid his *individual* opinions before the public in a separate volume, and not so boldly walked up to the face of authority to controvert received notions, because an audience composed of such materials as is generally collected in the theatre of an institution, is not the best calculated in the world to decide upon the merits or imperfections of theoretical knowledge; indeed (without meaning any disrespect to them) they avowedly go there for the purpose of instruction in the science of chemistry as *established*, and not to hear the imagery of a mind displayed on one day which may possibly be entirely controverted by a bolder theorist on the next.

The introductory lecture is a servile imitation, and, in some parts, a literal copy, of Brande's, delivered at the Royal Institution—anecdotes, such as these introduced, are doubtless seducing and pleasing to the mind; we should, therefore, have been glad to have seen something new in that way. We do not purpose going through every lecture, because the very concise manner which Mr. Gurney has adopted, defies all criticism; but we shall extract such parts as are new, and which certainly pourtray the energy of the author's mind, in a striking manner. We perfectly agree with him, that nature adopts the simplest laws to effect her great ends, and that she never employs two when one is sufficient (see p. 50.); therefore, if he can shew that all the known forms of crystals may be produced by certain arrangements of *one* primitive form, he will, at least, be adopting the most rational theory of crystallization; for certainly to the present there are decided objections. The ingenuity which Mr. Gurney has displayed, in

constructing apparatus to exemplify his opinions, command our admiration.

In this lecture, we confess, we were not a little surprised to find, that he considers *spirit and water*, (thereby, we suppose, meaning alcohol and water) when brought into contact, no *chemical compound*. It is a fact, we believe, admitted on all hands, that caloric is evolved upon such contact, and, if that be the case (which we have a hundred times witnessed,) we are at a loss to conceive what Mr. Gurney calls a *chemical change*—if a portion of caloric escaped upon adding those bodies to each other, either the alcohol or the water must lose that portion, and a change must have *been effected*—or else whence the caloric?

In a mere mixture no change ensues, except that the ultimate atoms of bodies are removed to a greater distance from each other, and are thereby made to fill a larger space.

In the lecture on caloric he relates a very amusing anecdote, which we extract for the entertainment of our readers.

"Some years since, when a very young man, I undertook to build a large organ, and I succeeded even beyond my own expectations, which were yet sanguine enough, for it was admitted on all hands, that the instrument I produced was one of a remarkably fine tone. It was built on *theory*, for I had never seen the interior of one till I had finished mine, and knew nothing whatever, practically, of the construction of them. Flushed with this success, I did not see any reason, in theory, to prevent my connecting a piano-forte with my organ; on the contrary, I imagined that they would improve each other. I conceived, that by an union of the two, the bad effect of the sudden stop of the organ would be remedied in a great measure by the cadence of the piano-forte, and the mixed tone of the two would produce an effect, pleasing and harmonious to the ear. I ultimately succeeded, in practice, and combined the two by the same set of keys, and affixed pedals, so as to enable the performer to play the instruments either separately, or together, as might please his fancy. The effect certainly was very delightful, and the expression far exceeded my most sanguine expectations. The instrument being now complete and in fine tone, I invited my friends to witness the effect of it; and, after waiting in anxious expectation, I was at last requested to play. I sat down, and commencing with a fine slow movement, began presently to change my modulation and time into what musicians call an "Allegro." Now, then, was the moment to introduce the lively notes of the piano; accordingly I removed my foot from the silent pedal, expecting to enrapture my audience, and receive "showers of applause." But judge of and pity my feelings, when I tell you, that instead of a "concord of sweet sounds," my instrument poured forth the most frightful discords that ever fought together for the especial discomfiture of musical ears! You may easily conceive my chagrin and disappointment. The mischief (as you will, perhaps, have anticipated) was occasioned by this property of heat which we are now considering. The number of persons in the room, added to a better fire, perhaps, than usual, rose the *temperature*; and, consequently, the metallic strings of the piano were *expanded* by it, their tension became diminished, and, of course, the notes were all flattened; while those of the organ pipes were rather affected in the opposite way, so that they produced together a complete separation and discord. The next morning, when the temperature of the room was reduced, the instrument was again in perfect tune."

We consider electricity, with the author, to be the grand mover of our terrestrial sphere, and we do not doubt that, at some not far distant age, we shall find it concerned in every thing connected with materialism; we may then expect to hear causes developed which are at present buried in the deepest obscurity. To Sir Humphry Davy we are mainly indebted, as the most brilliant star in this branch of science; to him we further look for benefitting mankind. We also hope to see medical galvanism assume that rank in medical science to which few persons suspect it will ever have any claim.

In regard to the temperature required for the combustion of the different gases, we had ourselves observed, from experiment, that the temperature at which ignition is stated to take place, has been much overrated in all chemical books, and much light may now be thrown on the discordancy of opinions which existed at the trial of Severn, King, and Co.* where this subject was largely discussed. The apparatus contrived by Mr. Gurney for ascertaining the true temperature at which the gases inflame, we consider to be ingenious and effective.

In speaking of the metals, the author seems to have fallen into an error respecting the natural alloys of platina. "He says it is extraordinary, that the ore in which platina is found contains nine different substances, viz. platina, iron, lead, copper, silex, and four substances which are never found under any other circumstances: These have been called osmium, rhodium, iridium, and palladium. By some they are considered to be entirely new and peculiar metals; but it seems probable, that they may turn out alloys of other metals, since they are found no where but in the ore of platina."

Now we do not see what business Mr. Gurney has to call in question the *actual proof* that both Dr. Wollaston and Mr. Tennant have given of the individuality of the metals called osmium, rhodium, iridium, and palladium, in the absence of all proof, on his part, that they are merely compounds; and he should also have better informed himself before he asserted, that those metals were no where to be found except in the ore of *platinum* (which, by the bye, is the scientific name): If Mr. G. had consulted the Philosophical Magazine, he would have found that the master of the American mint had discovered a natural alloy of gold and palladium, and which did not contain *any other substance*. Platinum itself has also been found associated with silver in Old Spain, which was shewn by Vaquelin.

In considering natural phenomena, as to the effect which electricity produces upon organic matter, we will be as bold as Mr. Gurney in supposing that an electrical current may be the cause of the diurnal motion of the earth, and we will go further, and say, that it is highly probable it causes its annual motion also. Dr. Wollaston, it seems, suggested the first idea upon this subject, as appears by a late paper read before the Royal Society, the production of their scientific president, in which he shews both those motions. We refer to that paper for the particulars of the experiment, or to the Annals of Philosophy, for January, 1824.

The last lecture on the blowpipe is certainly of great importance, inasmuch as it exemplifies, in an extraordinary manner, the power of caloric in decomposing every species of matter; for it appears, that there is not any substance, however refractory, that does not yield to this most powerful agent.

Dr. Clarke was certainly the best, if not the original, experimentalist with the mixed gases; and, we think, Mr. G. has very successfully followed in his steps; but we must beg leave to differ from him entirely in regard to the safety of Newman's copper-box blowpipe, with safety valve, as proposed by Professor Cumming. Perhaps Mr. G. has never given himself the trouble to reflect, that it is a property of copper to *tear* and not to *splinter*, and that, if an explosion should happen

* See Annals of Philosophy.

and burst the box, no danger need be apprehended; but that is not all, for when the gases are fully condensed in this box, it is next to impossible that ignited gas can make its way back into the reservoir against the immense pressure occasioned by condensation—in fact, it could only happen when the gas was nearly exhausted, and the pressure so diminished, that sufficient resistance did not exist to prevent the recession of flame—in such case, we will make bold to assert an explosion would scarcely be heard, and consequently could do no harm; the only objection we see to this blowpipe, is the regular diminution of pressure, and its consequent want of power. We consider the water-trough which Mr. G. used a very humble imitation of "Newman's," and perfectly useless; for the wire gauze is without question the safety part of the apparatus, and, if properly constructed, without danger. When great power is wanted we suspect it cannot be obtained by Mr. Gurney's instrument in its simple state, and it must therefore be rendered more complicated for that purpose—if so, he has much more to do yet. In experimenting with this blowpipe, we have ourselves observed a singular and interesting fact, which seems to have escaped Mr. G.'s notice; namely, that, under particular circumstances, if the mixed gases be passed through certain sized tubes with a limited pressure, and a lighted taper be applied to the orifice of the tube, inflammation will not take place, but the gases will be silently decomposed, evolving, at the same time, caloric, and forming water and aqueous vapour.

Something similar to the above has also been noticed by Grotthus:*

* Ann. de. Chemié. 82. 37.

on the whole, we dismiss this volume with our approbation; and we feel much pleasure in anticipating further communications from the same source.

R. PHILLIPS, F. R. S. &c. *on the Methods of employing the various Tests proposed for detecting the Presence of Arsenic.*

(Concluded from page 10.)

Nitrate of silver is liable to ambiguity; and, on this subject, I cannot do better than quote what Dr. Paris has stated in the work already alluded to, vol. ii. p. 241.

"The alkaline phosphates are found to produce precipitates with silver, analogous in colour and appearance to the arsenite of silver. This constituted one of the principal points in the evidence for the defence, on the trial of Donnell for the murder of Mrs. Downing; and it must be admitted as a valid objection, if the experiment be performed in the manner just stated; but there are other re-agents which will immediately distinguish these bodies, as we shall presently have occasion to state, under the history of the ammoniuret of silver, as a test for arsenic. The author has also shown, that there is a mode of so modifying the application of the present test, that no error or doubt can arise in the use of it, from the presence of any phosphoric salt. This method consists in conducting the trial on writing paper, instead of in glasses;—thus, drop the suspected fluid on a piece of white paper, making with it a broad line; along this line a stick of lunar caustic is to be slowly drawn several times successively, when a streak is produced of a colour resembling that known by the name of Indian yellow; and this is equally produced by the presence of arsenic, and that of an alkaline phosphate, but the one from the former is rough,

curdy, and flocculent, as if effected by a crayon, that from the latter is homogeneous and uniform, resembling a water-colour laid smoothly on with a brush; but a more important and distinctive peculiarity soon succeeds, for, in less than two minutes, the phosphoric yellow fades into a sad green, and becomes gradually darker, and ultimately quite black; while, on the other hand, the arsenical yellow remains permanent, or nearly so, for some time, when it becomes brown. In performing this experiment, the sunshine should be avoided, or the transitions of colour will take place too rapidly. It would be also prudent for the inexperienced operator to perform a similar experiment on a fluid known to contain arsenic, and on another with a phosphoric salt, as a standard of comparison."

The ambiguity arising from the use of nitrate of silver has also been most satisfactorily obviated by Mr. Smithson (*Annals of Philosophy*, Aug. 1822). This method consists in converting the arsenious into arsenic acid, or rather into arseniate of potash; and Mr. S. observes, "that a drop of a solution of oxide of arsenic in water, which at a heat of 54·5° of Fahr. contains not above 1-80th of oxide of arsenic, put to nitrate of potash in the platina spoon and fused, affords a considerable quantity of arseniate of silver. Hence when no solid particle of oxide of arsenic can be obtained, the presence of it may be established by infusing in water the matters contained in it." Instead of using a platina spoon, a glass tube, or the bottom of an oil-flask, may be employed; into either of these, put a little of the suspected solution, and which has exhibited indications of the presence of arsenic by other tests; then drop in a small crystal of nitre, evaporate the solution to dryness by means of a spirit-lamp, and afterwards heat it strongly in the same way. Add a little distilled water to the residuum, dissolve it, and then add nitrate of silver; if the solution before heating contained *arsenious* acid, it will now contain *arseniate* of potash, which will give a brick-red precipitate with the nitrate of silver, and without the intervention of any alkali. From repeated trials, I consider the confirmatory evidence afforded by this experiment as amounting almost to demonstration. This experiment is rendered shorter, and not less conclusive, by employing the arsenious acid and nitre both in the state of powder; but as the former is not always procurable after fatal effects have been produced by it, I have mentioned the solution as affording very satisfactory results.

I shall now mention the method of confirming the previous experiments, by reducing the arsenious acid to its metallic state. If the quantity of arsenious acid procurable be very small, then it is proper to dissolve the whole of it in distilled water, and the precipitates which are obtained by the action of the various re-agents should be collected and submitted to the metallizing process; but if the quantity of arsenious acid be so large that a few grains, or not less than one grain, can be spared for metallization, then the precipitates may be rejected, and much trouble will be spared.

This process is thus recommended to be performed by Dr. Paris, in his work before alluded to, vol. ii. p. 233:—

"Mix a portion of the suspected substance in powder, with three times its weight of black flux;* put

* This substance may be said to consist of charcoal in a state of extremely minute division, and the subcarbonate of pot-

the mixture into a thin glass tube, about eight inches in length, and a quarter of an inch in diameter, and which is hermetically sealed at one end. Should any of the powder adhere to the sides of the tube, it must be carefully brushed off with a feather, so that the inner surface of its upper part may be perfectly clean and dry. The closed end of the tube, by way of security, may be thinly coated with a mixture of pipe-clay and sand; but this operation is not absolutely necessary. The open extremity of the tube is to be loosely plugged with a piece of paper. The coated end must now be submitted to the action of heat, by placing it in a chaffin-dish of red-hot coals, for ten minutes, or a quarter of an hour; when, if our supposition respecting the nature of the substance has been correct, metallic arsenic will sublime, and be found lining the upper part of the tube with a brilliant metallic crust. The glass tube, when cold, may be separated from its sealed end by the action of a file, which will enable us to collect and examine the metallic sublimate. If a portion of this brilliant matter be laid on heated iron, it will indicate its nature by exhaling in dense fumes, having a powerful smell of garlic. Another portion should be reserved for future experiments.

"This method of detecting the presence of arsenious acid has been considered the most decisive, and indeed the only unexceptionable one, but of this we shall speak hereafter; at present we have only to observe, that it is very far from being a minute test; for Dr. Bostock confesses, that where less than three-fourths of a grain were used, he could not say that the metallic crust was clearly perceptible; and Dr. Black appears to have considered that one grain was the smallest quantity which could be distinctly recognised by such a process."

This method is unquestionably excellent, but I have found that the metallization may be very conveniently effected by means of a spirit-lamp. Indeed, it may possibly happen that a glass tube, such as is requisite for the above process, cannot be procured at the moment in which it may be wanted; a spirit-lamp may also be wanting. I have adopted the following plan: let a piece of tin plate, about an inch long, be coiled up into a cylinder of about 3-8ths of an inch in diameter, and if the edges be well hammered, it is not necessary to use solder. Perforate a cork previously fitted to a vial, and put a cotton wick through the short tin tube, and the tube through the cork, the lamp is now complete, and will afford a strong flame, taking care of course not to prevent the rise of the spirit by fitting the cork too closely. Instead of a test tube about six inches in length, which however is certainly much to be preferred, I have employed, with the precautions copied from Dr. Paris, a common draught vial; those best adapted for the purpose are called *ten drachm* vials; for they are long in proportion to their diameter. In using these vials, the suspected powder and black flux must not reach the bottom of the vial, for, on account of its thickness, it will readily break on the applicaton of heat. The vial, therefore, must be heated laterally, the arsenic will readily sublime, and will, after the vial has been divided by a file, if heated in the spirit-lamp, give out the well-known alliaceous smell. Indeed, if the quantity of arsenious acid be large, the smell which the volatilized metal affords may be resorted to in confirmation of other evidence; but it is to be ob-

ash. It is prepared by deflagrating, in a crucible, two parts of supertartrate of potash with one part of nitrate of potash.

served, that it must be mixed with charcoal, or some substance which reduces it to the metallic state, for arsenious acid, though volatilized by heat, and exhibiting white fumes, does not give any smell.

I have now concluded the sketch which I had proposed giving, and, if I mistake not, the use of animal charcoal, in the mode described, will afford some facilities. I hope also that I have, in some degree, strengthened the evidence which is afforded by using sulphate of copper, and rendered the process of metalization less difficult by using common instruments, and such as are within the reach of every practitioner, or readily procurable by him. In concluding, I beg to refer the reader to the work on Medical Jurisprudence, to which I have been so largely indebted, as one which will afford him much and minute information on a subject of some difficulty, and of great importance.

On the Cause of Formation of Worms in the Human Intestines, &c. &c.

(Continued from page 8.)

Similar worm diseases are epizootic among beasts, for besides the liver worm, another worm, called the pallisade worm (*Strongulus Felona, R.*), having its seat in the *trachea* and its branches, not seldom produces a disease among the sheep, that causes great ravages; this fact being brought to my knowledge by a great many farmers, who wrote to me on the subject.—So worm diseases, in the same manner, can be epidemic among men; for if, for instance, a certain state of our atmosphere can contribute to, or even cause a more frequent occurrence of, the bilious fever, or some other not contagious illness, so also there can be raised symptoms of worm diseases at certain fixed epochs, and in some particular countries, which and when, such remote causes of the vermi formation are generally operating, as are looked upon to be epidemic and endemic. Under certain restrictions, then, worm epidemics are not to be considered as mere chimerical suppositions. A very remarkable one has been observed by Marie, in Ravenna and its environs, where all the diseased evacuated worms, not only by the natural secretions, but also by vomiting. Notwithstanding this, we must take care not to consider as an epidemical worm disease whatever may have been termed such. Thus, for instance, it is not at all clear to me, that worms should have produced an epidemic putrid fever, as Bernard seems to believe; but I rather think it probable that worm diseases on the same spot are endemic. But, beyond all doubt, it is absolutely false, when Ronnevault terms it an epidemic putrid fever, meaning a common putrid fever, merely on account of some of the diseased persons evacuating worms. In the Journal de Medicine, among the remarks on the description of a putrid worm fever, published by Dufour, it has, for this reason, been remarked, that the term "worm fever" should not be made use of, but the aforesaid disease should rather be called "a fever complicated with worms." Worm epidemics, then, will only take place where the formation of worms in the intestines belongs to the endemic constitution. Nevertheless, it is also taught by experience that there are some provinces, nay, whole countries, where worm diseases are far more frequent than in other regions. Daquin, though he confesses his inability to explain the cause of this occurrence, states that worms are no where met with more abundantly than in Savoy, near

Chambery, where, not only among the lower class of people, but also among the higher ranks of society—where a want of wholesome food, and other such like reasons, cannot be supposed—worm diseases are very frequent.

Holland and Switzerland, besides a great many parts of other countries, are chiefly looked upon as being those where worm diseases are more frequent. As to the inhabitants of the latter, it will hardly be possible to explain the cause of the more frequent formation of worms among them. Scarcely can this cause be sought in the state of the atmosphere, which in this mountainous country is of quite an opposite nature to the level Netherlands. With no more justice can it be supposed to reside in the quality of the food, since, at least in the somewhat larger towns, the way of life in this respect is of no material difference with that of the neighbouring countries. Perhaps milk and cheese are the only victuals to be charged with it in this instance; the former, indeed, not so much on account of its being more frequently taken, but chiefly on account of its richness in nutritive substances, it being given on the spot, unmixed with water, or unadulterated, that is to say, in its natural condition. On purpose I said, "perhaps," since I give this assertion merely as a fugitive supposition of mine, which most willingly I shall retract as soon as this among the Switzers more frequent occurrence of worm diseases, and especially of the tapeworm, which their neighbours are almost entirely ignorant of, will be explained to me in a more satisfactory manner.

Among the Germans, the greater part of the French, the Italians, and even among the inhabitants of Tyrol, no other than ringwormsare found; whereas a true Switzer, born from a Swiss mother, never yet has suffered by the ringworm. Among the Russians and Poles, the tapeworm likewise is met with, whilst Rudolphi, according to his assertion, has never received any other but the ringworm out of Sweden. There the cause could very well lie in a certain peculiar disposition of the human race, from which each of the aforesaid nations descend, and whose primitive ancestors, with regard to the Russians and Swedes, are different. But from whence have the Switzers got the same worms as are found among the Russians? This has been till now an enigma, and certainly will remain so for a long lapse of time yet to come.

Among the Belgians, the quality of the atmosphere, or of the clime, which is already exerting so great an influence upon the temper of the nation, may very well be one of the common causes of the vermi-formation. But it is quite a mistaken notion to suppose, that the more frequent feeding upon fish should be anywise contributive to this formation. According to Rudolphi, there are, besides the Dutch, many other coasters, who, not less than them, make use of fish-meals, and who, for all that, do not suffer more than they by worm diseases. The late Professor Reinlien having been, during ten years, a physician to the Carthusian Friars, who make use neither of meat nor milk in their diet, but chiefly feed upon fish, asserts that he never found one of them who suffered by the tapeworm, nor could one of the oldest among them recollect ever to have seen one of his fellow-monks affected by this disease.

Nevertheless, the quality of the food may, sure enough, be greatly

contributive to the formation of worms, of which instance, Reinlien communicates two very remarkable occurrences.

"Two years ago," he thus relates, "I treated a bachelor of about sixty years of age, who had the appearance of a very healthy bodily constitution, kept a very orderly diet, and had enjoyed throughout his lifetime an uninterrupted state of health. It was almost seven months since some well meaning friend of his had advised him, on account of his now advancing age, to alter his diet, and assured him, that henceforth he should do better to feed upon a milk diet. The poor man implicitly followed this advice, and bore this change without any harm during the course of some weeks. By degrees, however, he felt, especially after dinner, a tension in the belly, a pain in the region of the heart, a palpitation, and a decrease of appetite; his former good look vanished away, and he became subject to frequent complaints. Upon examination, I found the weak side of the bowels, together with the belly, in tension; and having been informed of the aforesaid symptoms, and of the change that had taken place in his diet, I was induced to suppose a gastric disease, and immediately ordered a purgative, consisting of six ounces of laxative infusion, with six drachms of sal de seignette.

"I saw him the next day. His servant, who attended him for the last thirty-two years, stood anxiously in expectation of my visit, and, on my arrival, showed me in the close-stool of his master, together with a great deal of other excrements, a multitude of those small stones, commonly called gourd kernels,* which he took for melon currants. Upon my inquiries whether he had ever before observed any such thing in his master's stool, he replied, that for a great number of years he never had perceived any thing of the kind; but that, about three weeks ago, he had, for the first time, every now and then, begun to see some traces of the same phenomenon, which, however, he had thought to proceed from some other cause than his master's illness. Upon this, I directed my treatment against the tapeworm, and was so happy as to drive it off completely on the seventh day after the aforesaid occurrence. My patient now returned to his former diet, and until this very hour enjoys good health. Now, I ask," continues M. Reinlien, "how it can enter into the mind of any man of sense, to suppose the germ of this worm to have been, during sixty years and upwards, concealed within the body of this person, and not before now to have been developed?"

(To be concluded in our next.)

* Kurbiskairna.

MEDICO-CHIRURGICAL TRANSACTIONS. VOL. XII. Part II.

(Continued from page 5.)

In the following paper, Mr. Powell relates a case of ruptured uterus during parturition. The fœtus was extracted by Dr. Davis, by turning and craniotomy; and after very severe suffering from hypogastric pain, difficulty of breathing, &c. the patient got well.

Illustrations of the Medical Properties of Quinina.—By JOHN ELLIOTSON, M.D. &c.—Dr. Elliotson commences his paper with an outline from the French journals, of the history of the substance, and its exhibition, both of which have previously been given more copiously in several of our own journals. Dr. Elliotson prescribed the sulphate of quinina in the form of pills:—

"I may add, that, although in doses of five grains every six hours, I have never observed any disturbance of the function a dose of ten grains occasioned vomiting in the three only instances in which the medicine was carried to this extent, from its not strengthening the patients in ordinary doses."

The following case seems to argue strongly in behalf of its tonic powers:

"A poor Irishwoman, half-starved, and flooding, was brought into St. Thomas's, labouring under severe typhus, on the 19th of June. She was supported by plenty of beef-tea and milk; the epigastrium, forehead, and occiput were blistered; and hyd. cum creta was prescribed in doses of ℈j, and sometimes ℈ij, every six hours, till the mouth grew sore. The delirium and stupor were entirely subdued, and the tongue became clean and moist, but the debility increased hourly. The face became ghastly, and the body sunk lower in the bed. I ordered three, and soon five, grains of sulphate of quinina to be given every six hours, and the diet to remain as before. A striking amendment was observed the next day, and she speedily recovered. After being convalescent some time, the medicine was omitted; but, when I thought of discharging her, she suddenly relapsed into extreme prostration

of strength, passed her urine and fæces again involuntarily, and grew delirious; but the tongue remained clean and moist. The two blisters to the head were repeated, and the sulphate ordered as before, milk and beef-tea, *ad libitum*, continuing to be her diet. The amendment was not so sudden, but from the first day of recurring to the medicine, the debility ceased to increase; in a few days she clearly gained strength, and was soon convalescent. After taking the full diet of the house, and a pint of porter daily, for two or three weeks, she was discharged perfectly strong and well."

Dr. Elliotson appears to have been equally successful with the French physicians in exhibiting the medicine in intermittent; so that its efficacy appears to be proved.

"It is of the greatest moment to have the sulphate genuine, as its high price, three or four guineas an ounce, makes it an object with unfair dealers to adulterate it. It should be intensely bitter, as white as snow, and extremely light, resembling benzoic acid in its appearance."

Having been successful with the sulphate, Dr. Elliotson next tried the quinina itself in its alkaline form.

"The article was prepared for my use by digesting cinchona in a very dilute solution of sulphuric acid (℥ ij to four gallons of water), straining, and then adding magnesia by saturation, by which means the quinina was precipitated from the acid, mixed with tannin and extractive matter, and sulphate of magnesia remained in solution. The precipitate was again dissolved in sulphuric acid, again precipitated, and finally washed and dried. A pound of cinchona cordifolio furnishes about an ounce of this impure quinina, or about two drachms of pure sulphate of quinina by another process, in which quinina is obtained pure, by means of alcohol, previously to its formation into a sulphate, whence the greater real expence of this article."

The simple quinine was tried in eleven cases of intermittent, with the same success as the sulphate, with the favourable exception that Dr. Elliotson never observed derangement of the stomach induced by doses of the impure preparation employed, in doses as large as ten grains every six hours. There is not, according to our author, any unpleasant narcotic effect produced by either of the medicines, and they frequently succeed when the bark itself, in any of its more antique preparations fails.

"After the extraction of the quinina, the yellow bark is as tasteless as so much wet saw-dust; and I presume the same is the case with the pale, after the extraction of the cinchonina, and with the red, after the extraction of both."

We do not accord with Dr. E.'s, mutations in the original nomenclature of the new French medicines—they are neither felicitous nor warrantable; and partake of a dull monotony that might well have been dispensed with.

PATHOLOGY.—*On the Sublingual Pustules which supervene after the Inoculation of the Rabid Virus.* By M. MAGISTEL.

M. Marochetti had stated the existence of pustules under the tongues of those who had been bitten by a rabid animal; and had attributed great advantages to the opening and subsequent cauterization of these pustules, along with the internal employment of the decoctum genistæ—a mode of treatment which M. Marochetti had seen successfully employed in the Ukraine. An event, which occurred on the 12th of October, 1822, at Boulay, enabled M. Magistel to enquire into the correctness of M. Marochetti's observations. Several individuals of both sexes, and some sheep, having been bitten by a rabid dog, M. Magistel was sent by the administrative authorities, and he cauterized the wounds forty-eight hours after the accident. This gentleman carefully watched for the appearance of the pustules, mentioned by M. Marochetti, and in several subjects confided to his care, he observed pustules arise, unknown to the patients, without any precursory symptoms,

and without occasioning pain, or cramping the movements of the tongue. Some of those pustules appeared on the sixth day, others subsequently, and the last on the thirty-second day. M. Magistel distinguishes them into two species, which he denominates *crystalline* and *opaque*. The *crystalline* pustules are projecting, rounded, and of the size and form of hemp-seed; they are transparent, and contain a limpid and serous fluid. The *opaque* pustules are flattened, of a circular form, of the size of a lentil, and covered with a brownish pellicle, without transparency. The former seem situated at the superfices of the inferior surface of the tongue; the latter appear to penetrate into the substance of the organ, so as to present, when they are opened, a small ulcerated cavity.

Almost all these pustules are situated on the sides of the frænum linguæ, and on the lateral parts of the inferior surface of that organ; but a very small number are seen on the edges and extremity of the tongue. M. Magistel has only observed one on the dorsal surface, and the equivocal characters which it presented induced him to consider it as not hydrophobic. He observed them also on the edges of a wound made on the lower lip of one of those who had been bitten.

M. Magistel asked, whether both these sorts of pustules are of the same nature, and whether they are equally hydrophobic? The crystalline pustules appeared at a period when the hydrophobic symptoms had not manifested themselves in any of those who had been bitten, and they did not appear in all the individuals. The opaque showed themselves at a more advanced period; all the bitten, without exception, exhibiting them. The cauterization of both species was soon followed by their perfect cicatrization, no traces remaining of them, and the cauterized parts being in the best possible condition.

The *decoctum genistæ* was perseveringly administered to all those who were bitten, and was used for washing the wounds; which, unfortunately, had not been cauterized until forty-eight hours after the accident, except incompletely, by the nitric acid, at the expiration of more than forty-five hours.

Of ten bitten, whom M. Magistel attended, many of whom had received numerous and deep wounds, five died with all the symptoms of the most confirmed hydrophobia, in spite of the uninterrupted use of the *decoctum genistæ*, and the cauterization of the sublingual pustules.

So far, therefore, as the cases of M. Magistel go, we fear that but little dependence can be placed on the observations of M. Marochetti: on so important a subject, however, the counter-statements of one individual are sufficient to overthrow the positive remarks of another.

Examination of the Blood. By MM. Prevost and Dumas.

The microscopic observation of the blood satisfied these gentlemen that this liquid, during life, was nothing else than the serum, holding in suspension, small, regular, and insoluble corpuscules. These are uniformly composed of a central, colourless spheroid, and of a species of membranous bag, of a red colour, surrounding this spheroid, from which it is easily separable after death. The central body is white, transparent, of a spherical form in animals, with circular particles; of an ovoid form, in those with elliptical particles. Its diameter is constant in the first, but

it varies very perceptibly in the second. It manifests also a great disposition to form aggregates or ranges, in the form of a string of beads.

The coloured portion appears to be a kind of jelly, easily divisible, but insoluble in water, from which it may always be separated by repose. It is likewise transparent, but much less so than the central corpuscle; and the fragments arising from its division are not susceptible of regular aggregation. As the attraction, which keeps the red substance fixed round the white globules, ceases at the same time with the movement of the liquid, these globules can then obey the force which tends to unite them, and to form a net-work, in whose meshes the liberated red colouring matter gets enclosed; and thus produce the phenomenon of coagulation. If the coagulum be exposed to a stream of water, the colouring matter is washed away, while the aggregate formed by the white globules remains in the form of filaments, in which may be recognised, by means of the microscope, the aspect and structure of the muscular fibre.

Three animal substances ought, therefore, to fix our attention: These are, the albumen of the blood, the white globule, and the colouring matter which envelopes this. With respect to the colouring matter of the blood, these chemists suppose that it is formed of an animal substance, in combination with a peroxide of iron. The colourless globules they consider to be coagulated albumen. They have examined the proportion which the white corpuscles and red matter together bear to the rest of the blood, in a great variety of animals; and they find them most abundant in birds, next in the mammalia, especially the carnivorous mammalia; and they are least plentiful in cold-blooded animals. In man they constitute about one hundred and twenty-nine parts by weight, per thousand. They are more abundant in arterial than in venous blood; one thousand parts of the arterial blood of the sheep, dog, and cat, contain ten parts more of these particles than blood taken from the veins. The serum is identical in both.—*(Ann. de Chimie. Mai*, 1823.)

HEADS *of* SURGICAL LECTURES, *delivered by* SIR A. COOPER, Bart., *at* ST. THOMAS'S HOSPITAL.

(Continued from page 14.)

Sir Astley concluded this evening's lecture by offering a few observations on aneurisms of the scalp.

"The first case of this description that I saw, was sent to me by Mr. Tomlin, of Hackney, in which I tied the artery proceeding to and from the sac.

"If the aneurismal bag be not very large, you may cut immediately across it; over which apply a piece of folded lint, then adhesive plaster, and over all a roller. If the swelling be small, that is, not larger than a middling-sized walnut, adopt the following mode, viz. make a circular incision down to the occipito-frontalis tendon; by this means the connection between the blood-vessels is destroyed, and by applying dosils of lint and adhesive plaster, the disease is got rid of.

Jan. 12th.—HYDROCELE.—"Hydrocele is an accumulation of water in the tunica vaginalis testes. They are in error who suppose this fluid to lie between the tunica vaginalis and the tunica Albuginea: the former is reflected over the testes, in the same manner as the pericardium is over the heart.

"The first appearance of hydrocele is at the lower part of the scrotum; the swelling gradually en-

creases, and rises until it reaches the abdominal ring, assuming a pyriform shape. The swelling becomes light and elastic; it is generally unaccompanied with pain, unless when inflammation of the testicle has preceded it; it is but of little weight. *A hydrocele* thus formed is generally transparent. The scrotum, in this disease, is undiscoloured, and the size of its vessels very little enlarged. On applying the fingers, a fluctuation will be discovered from one extremity of the tumour to the other; but, if other fluids are contained than that which is usually met with (serum) in hydrocele, the fluctuations are confined to one spot, and this circumstance, with the encrease of weight, will distinguish the disease from true hydrocele.

There are certain varieties of this disease, with which, if the surgeon be not acquainted, may lead to error. The tumour is sometimes double—one in the scrotum, and the other above the abdominal ring; in consequence of the distension above the abdominal ring giving the tumour a double appearance. An hydrocele is not always transparent—this arises from a thickness of the tunic, &c., and this state of the disease is more commonly met with in the hydroceles of warm climates.

There is another species of hydrocele, with two collections of water, with their cysts entirely distinct from each other. The fluid contained in hydrocele is a yellowish serum, and precipitates its albumen by heat—and that which is contained in a hernial bag is transparent, having none of the properties of serum, &c.

"The testicle is sometimes united to the fore-part of the tunica vaginalis—puncture then on either side, and not before; this is in consequence of the patient having been subject to inflammation of the testicles before the hydrocele began to form.

"It sometimes happens that a separate bag is formed in the tunica vaginalis, which entirely covers the testicle, and the tunica albuginea.

The tunica vaginalis has sometimes been found ossified. The late Mr. Warner, surgeon, of Guy's Hospital, presented Sir Astley with a specimen of the tunica vaginalis completely ossified: and there is now in the museum of St. Thomas's Hospital another instance of the same description.

"Independent of serum there are several small cartilaginous bodies occasionally found contained in the tunic, the result of diseased secretions.

"There is another variety of hydrocele, which communicates with the abdomen; in this case the patient is relieved by tapping, without the risk of peritoneal inflammation: all, afterwards, to be done, is to apply a truss, to shut up the communication, and leave the cure to nature.

The method of distinguishing hydrocele by its transparency, is to darken the room, and grasp the tumour at its lower extremity, so as to squeeze the fluid to the fore-part; then placing a lighted candle at its anterior surface, the transparency will be discovered, &c. The exceptions to this method are the hydroceles of the West Indies and the Coast of Africa; in which the weight, swelling, pain, or pressure, &c. are discriminating marks.

"Hydrocele is with difficulty distinguished from hæmatocele, which is an accumulation of blood in the tunica vaginalis testis, which, nevertheless, is not accompanied with transparency, and is the result of a blow, &c.

Cause. — Hydrocele is caused, generally, by an increased secretion, in consequence of inflammation;—also, from mere relaxation of the vessels, and a difficulty of the return of blood to the part. That state o

hydrocele which is the result of inflammation, may be cured by promoting absorption, and using a solution of the muriate of ammonia; but those resulting from relaxation, are not benefitted by a similar plan of treatment; but, if left to itself, it will undergo a spontaneous cure, &c.

Treatment of hydrocele.—When people are afraid to submit to the operation, or are too far advanced in years, the palliative mode of treatment is demanded.

Mode of Operating.—Introduce a trocar and canula about two-thirds of the swelling, obliquely upwards—withdraw the trocar and push in the canula; always press the tumour posteriorly when about to introduce the trocar, which, with the canula, ought to be of the smaller sized. It is not adviseable to perform the operation with the lancet and probe, it can never be done cleanly with such instruments, independent of their liability of inducing hæmatocele, hæmorrhage, &c. The fluid will, perhaps, require to be drawn off in the above manner two or three times a year, &c.

" The operation for hydrocele is not to be considered divested of danger. Several cases are known where it terminated fatally. Old people, who have undergone this operation, should be advised to keep their beds the day afterwards. There are some people that will die from the slightest operation—there are some, in fact, whom we cannot cure, and others, again, whom we cannot kill.

Jan. 14th.—On the cure of hydrocele, &c.—" Hydrocele is not cured by any accidental bursting of the sac, in which the water is contained. It is effected by means of three processes, viz. absorption, adhesion, and granulation. Medicine, or stimulants, have no influence in removing hydrocele, as it is usually generated. In children and very young people, absorption of the fluid may be promoted by giving the submuriate of mercury, combined with rhubarb, scammony, &c. with the liquor ammoniæ acetates and the muriate of ammoniæ. Injection, seton, and incision have been thought to produce adhesion; the first, however, does not always produce it, nor is it necessary to the cure of hydrocele, as a new action is frequently induced without it, whereby a change in the part is effected.

" Various operations have been proposed, at different times, for the cure of hydrocele. The first was by incision, but this mode was soon found not to succeed. The next was by excision, or cutting out a portion of the tunica vaginalis on each side, &c. Mr. Trye, of Gloucester, recommended taking away small portions of the tunic, &c. The next mode was that of putting in a sponge tent, which promoted the cure, partly by the adhesive, and partly by the granulating process. Caustic has also had its advocates.

" There are but three operations for the cure of hydrocele, which are occasionally resorted to, viz. seton, incision, and injection.

(To be continued.)

Phrenological Observations, *&c. on the Head of* Thurtell, *executed at Hertford, the 9th instant, for the murder of* Mr. Weare.

As soon as it was known that the body of this unfortunate man had been deposited at St. Bartholomew's Hospital, where it arrived on Friday evening, the day of the execution, the avenues leading to the place, the next morning, were crowded to excess by all classes, to get a view of the subject. So numerous, in fact, were the applications for this purpose, under the pretext of professional immunity, that it became necessary to

adopt a plan to avoid, as much as possible, that aggregation of common curiosity, which otherwise might never have been exhausted, for the admission of such only as actually were of the medical profession. The measure was a wise one, and not without its advantages. The passport to the theatre where the body lay, was an answer to an anatomical question put by those who had charge of the inner door, which, if not answered, was met by an absolute refusal. Neither were these questions of the catch kind; and, it is but justice to say, that the gentlemen on whom this duty devolved, where not deficient in urbanity where they recognised unquestionable pretensions; although there were many, aye! and of the profession too, such is the present state of anatomical knowledge, among numbers who, at this very time, are practising most graciously and lucratively, in their own way, about the metropolis, could actually not tell in what part of the body Poupart's ligament is situated!!

The remains of Thurtell presented a tolerably good exhibition for the eye of the anatomist—they were in excellent condition—the large muscles of the body were finely preserved. The pectoral muscle and biceps, as connected with the upper extremities, were, if we may use the expression, in full bloom; those of the femur having their origin about the pelvis, in equal condition. The subject, upon the whole, was of as perfect a kind as could possibly have been wished for, by the amateurs of anatomical symmetry. The features, full and prominent, were only partially changed by the livid intermixed hue usually witnessed in similar instances of death. They were not distorted—there was even an apparent composure that might well have indicated a less violent extinction of the vital spark. The muscles of the neck were rather relaxed—the rope had left a deep impression on the integuments, which were highly discoloured, where it had been applied. The eyes were more than half open, and the lips separated in the natural manner, displaying an excellent set of large front teeth—the upper lip had a convexed bulky appearance, which projected somewhat over the lower—the nose strongly marked by two regular indentations, forming, what our neighbours the French would stile, *un nez bienfait*. The stature, it is said, was about five feet ten inches. The thighs were thickly studded with black curly hair; on the breast, however, there was not that profusion which might have been anticipated from the co-existing marks of muscularity and complexion of other parts of the body. The forehead was considerably narrowed, possessing an excessive contrast with the developement of the back part of the scull.

With regard to phrenological indications, we must confess that, in the structure and conformation of the cranium of Thurtell, there exist several apparent, though accountable, contradictions to the infallibility of this interesting science; and, if these are not reconcileable to the received, though mistaken notions, imbibed by those who have not ventured to think for themselves on the subject, the doctrine cannot, on this account, be either impeached or impugned upon grounds so destitute and void of argument, as are attempted to be set up against it.

Phrenology professes to be an inductive science, and those who cultivate it do not pretend to powers of divination—it is founded on a discovery, it is true, that the size of particular portions of the brain bears a relation to the energy of particular mental powers or dispositions—but

there is a qualification, however preponderatingly, or sparingly, it may be developed, which can only be inferred from the rationale of the whole.

On this subject, however, it is not our intention to digress—let those who doubt, investigate and judge for themselves. The organ of destructiveness, it has been asserted, is not found in the head of Thurtell; but those who say so have not a phrenological tact. Did these assertors expect, on placing their fingers on the spot, inhabited by this organ, to find a protuberance as large as a China orange? The organ does exist, and sufficiently large too to realize the propensities ascribed to it, which is not murder alone, and this only, large or small, when too energetic, independent of its adding force to the whole character. This organ is found in combination with a full developement of the higher faculties and sentiments, and it materially aids in the production of a character fitted for great achievements. It does not necessarily lead to cruelty; on the contrary, when BENEVOLENCE and the higher sentiments are strong, it may be employed with full effect, to promote, by the exercises of a just severity, the purposes of virtue. "*It leads to crime only when too energetic, and when the sentiments which should counteract it are not sufficiently powerful.*"

Now, the organ of cautiousness, which is admitted to be an essential ingredient in a prudent character, was wanting in Thurtell's head. This faculty, which is supposed to produce doubts, hesitation, caution, circumspection, or timidity and fear, according to the degree in which it is possessed, and the other faculties with which it is combined, was not evidently a characteristic mark, independent of the want of structural identity, in the individual in question. We deem it unnecessary to advert to those points of the part, which sufficiently bear only these assertions. Let those, then, who irrationally contend against the doctrine, compare these items with the documents they can at all times have access to, and say and prove that our observations are incorrect—and that there is neither truth nor affinity in the science of phrenology.

(This Analysis, &c. will be concluded in our next number.

HOSPITAL REPORTS.

GUY'S, *Jan.* 16.—The hip-joint operation was performed here this day by Sir Astley Cooper. The subject had been previously amputated above the knee. We are prevented this week, for want of room, from giving the history of the case, and the details of the operation; which, however, will be found in our next number.

Mr. Key and Mr. Morgan, are the newly appointed Surgeons to this Hospital, *vice*, Mr. Forster and Mr. Lucas, resigned.

ERRATA for No. 49.

Page 10, right-hand column, for Sactorius in three places, *read* Sartorius.

DIED.—At his father's house, Birmingham, after a lingering illness, borne with exemplary fortitude, greatly regretted by all who knew him, for his moral and social virtues, and the affability of his manners, EDWARD GRAINGER, Esq. Lecturer on Anatomy, Maze Pond, Borough.

TO CORRESPONDENTS.

We have been reluctantly compelled to withdraw the Portrait of Sir A. Cooper, which was promised and intended to accompany the preceding number of this Magazine, in consequence of some misunderstanding with the proprietor of the plate, which we did not anticipate; but, as some important arrangements are in contemplation relative to the future management of this journal, we trust to be enabled forthwith to introduce an adequate substitute for the absence of it.

The Memoir of Sir A. Cooper will be resumed and concluded in our next.

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THE WEEKLY

Medico-Chirurgical Review & Philosophical MAGAZINE.

No. LI.] SATURDAY, JANUARY 24, 1824. [*Price 4d.*

"FLORIFERIS, UT APES, IN SALTIBUS OMNIA LIBANT
OMNIA NOS, ITIDEM, DEPASCIMUR AUREA DICTA."

Successful Case of Amputation at the Hip-joint. By JAMES SYME, *Member of the Royal College of Surgeons, and Lecturer on Anatomy in Edinburgh.—(Edin. Med. and Surg. Jour.)*

We gave the history of this case, with some account of the operation, under the head of "HOSPITAL REPORTS," in our 36th number, to which we beg leave to refer our readers. We now fulfil the promise made at that time 'to communicate further particulars,' as soon as they might transpire.

"I had not seen or heard of him," (the patient) observes Mr. Syme, "for many months, when one day, in the latter part of August last, his father stopped me in the street, and told me that his son had made up his mind to the amputation. I called soon afterwards, and found the patient fully resolved on being delivered from a disease which had confined him to his bed for more than two years, and was daily getting worse and worse. I therefore subjected the limb to a very careful examination.

The result of the examination was, that a considerable alteration had taken place since the last time Mr. Syme had seen it. "The swelling was greater than ever, and now extended to within an inch of the trochanter major. A profuse glairy discharge was poured out from many openings on the posterior and outer sides of the limb, and abscesses were constantly forming farther and farther up towards the joint." When Mr. Syme saw him, there was one which had just opened near the tuberosity of the ischium, and another was beginning to point not far from the trochanter major. The appearance of the patient was also altered for the worse—being still more emaciated; and, although five feet eight inches in height, he still retained the character of a boy.

"Notwithstanding all these unfavourable circumstances, I still considered the operation adviseable, since the lad's destruction was otherwise inevitable; and this manner afforded him a chance, which was rendered better by his own good spirit, and determination to live. His digestive functions continued tolerably healthy; and Dr. Abercrombie, who had the goodness to visit the patient, in whom he took an interest, gave me still farther encouragement, by coinciding as to the propriety of operating.

"The next question was, at what part of the limb should amputation be performed?

"In the earlier parts of the disease, nothing forbade removal below the trochanter; but now the case was very different.

Under every appearance of the case, amputation at the hip-joint appeared to Mr. Syme and Mr. Liston to be a justifiable operation, notwithstanding it had rarely or never succeeded in private practice, still this was no reason it should not do so.*

METHOD OF OPERATING.—The day being fixed, (September 2d,) for performing the operation, it was done in the following manner, assisted by Mr. Liston, the friend and instructor of Mr. Syme, in the presence of Drs. Abercrombie, Anderson,

* When Mr. Liston, two years ago, tied the subclavian artery with success, for the first time in Great Britain, that operation was looked upon as desperate as amputation at the hip-joint is now. But since then, instances of his success have been quite common in the records of Surgery.

and Scott— nd Mr. Marshall, Surgeon to th- rces:

"Having some difficulty, placed the patient upon a table, so that the affected limb was perfectly free, and ascertained that Mr. Liston was ready to make pressure when and where required, I introduced a narrow knife, about a foot long in the blade, which was sharp on one side only, at the proper place for transfixing the limb; but being prevented by the bent position in which, owing to long habit, the patient obstinately retained it from passing onwards in the direction of the tuberosity of the ischium, by the neck of the femur, I lost no time in the repetition of fruitless attempts, but instantly changed my plan.

"Without removing the point of the knife, I brought down its edge obliquely, and, by a sawing motion, quickly cut back, in a semicircularly direction, to the tuberosity of the ischium, up along the femur, and round the trochanter major, so as to form, very speedily, identically the same flap which would have resulted from that I meant to have followed.

"While Mr. Liston covered the numerous cut arteries with his left hand, and compressed the femoral in the groin by means of his right, I gathered together all the mass of undivided parts on the inner side of the thigh, with my left hand, and then insulated the nick of the bone, by passing the knife close past its lower surface. I now cut down close along the bone for some way below the trochanter minor, and lastly made my way outwards obliquely, so as to form a good internal flap.

"Mr. Liston, holding aside the flaps, I made a single cut with my long knife upon the head of the bone, which started with a loud report from its socket, as soon as abduction was performed. Finally, I passed the knife round the head of the bone, cut the triangular and remaining portions of the capsular ligament; and thus completed the operation, which certainly did not occupy, *at the most*, more than a minute."

This was certainly very expeditious work, evincing considerable anatomical address in desarticulating the head of the femur from the acetabulum—still, we cannot conceive how the operation could be thus completed, when only its first and least important stage was effected.—However

"I then proceeded, without delay, to take up the arteries, &c.

"As soon as the femoral, which had been completely commanded by pressure in the groin, was secured, Mr. Liston relaxed his hands, in order that we might form some estimate as to the size and number of bleeding vessels, and then, had it not been for thorough seasoning in scenes of dreadful hæmorrhage, I certainly should have been startled, prepared as I was to expect unusual vascularity, owing to the extensive action so long carried on in the limb.

"It seemed, indeed, at first sight, as if the vessels, which supplied so many large and crossing jets of arterial blood, could never all be closed. It may be imagined we did not spend much time in admiring this alarming spectacle. A single instant was sufficient to convince us, that the patient's safety required all our expedition; and, in the course of a few minutes, hæmorrhage was effectually restrained, by the application of ten or twelve ligatures.

"The flaps were now brought together, and retained in contact by five or six stitches. Some dry caddis was laid over the wound; and, lastly, I applied a single-headed roller obliquely round the body and stump, moderately tight, so as to afford proper support to the flaps; and then we lifted into bed the patient, who was wonderfully little exhausted.

The operation was peformed at 12 o'clock; and, during the remainder of the day, nothing occurred of much interest excepting occasional vomiting, which, at the time, might be attributed to the effects of an opiate given about two o'clock, on account of pain and restlessness. In the evening, some bleeding appeared, but soon ceased. The patient, a short time afterwards, complained of much pain and tightness in the stump, that the bandage and two stitches were obliged to be cut, which allowed some clotted blood to escape, and procured considerable relief. The wound was afterwards dressed as before. Mr. Liston saw the patient at 12 o'clock that night—he was very low, his foot cold, and his pulses hardly perceptible. He, however, gradually recovered, under the moderate use of stimulants, and the following morning, as far as regarded strength, was better than since the operation. The stomach continued irritable, rejecting instantly what-

ever was introduced into it. An injection, containing 40 drops of laudanum, was prescribed. Dr. Abercrombie visited the patient soon afterwards, and recommended a persistence in the use of opiates, solid and fluid; the good effects of which were soon made manifest, by the vomiting gradually subsiding, and the stomach beginning to retain beef-tea and other fluids in small quantity. The injection was repeated in the evening, and a grain of solid opium continued to be given by the mouth every three or four hours.

On the second day after the operation, there was a decided improvement in all respects. On the third, the wound was examined, when it looked perfectly well. The discharge which, at first, was thin and watery, gradually became thicker and more healthy—opium discontinued after the first week—bowels brought into a good state by the use of turpentine injections—the patient's appetite, sleep, and pulse continued to improve.—"In short, every thing went on well."

The ligatures began to separate about the 12th day, and by the third week they were all withdrawn.

To be brief, about a month after the operation, the wound being nearly healed, when every thing promised a speedy restoration of the patient to health, symptoms of ascites made their appearance, which carried off the patient at the expiration of the eighth week from the operation, notwithstanding every endeavour to combat them with success.

Post Mortem Examination.—The body was examined by Mr. Syme, in the presence of Dr. Abercrombie. In the cavity of the abdomen, a quantity of fluid, sufficient to fill a large hand-bason, was found. The liver was more than twice its usual size, very hard, yellow, and completely altered in its structure, there being no appearance of acini. The gall-bladder contained a quantity of fluid, more resembling serum than bile. The spleen was double the natural bulk, but sound and healthy. The intestines were exceedingly thin, and looked as if destitute of a muscular coat. The lungs, heart, and all the other viscera, were, to appearance, perfectly sound.

In concluding the history of this case, Mr. Syme offers the following remarks, viz. that amputation is discountenanced by most surgeons on the following grounds:—

"1. It is too great a shock for human strength to support. 2. The hæmorrhage, which must attend so great an operation, where no tourniquet, can be applied, will render the patient's recovery, should he even get over the immediate shock, very tedious, if possible. 3. The confusion which must be occasioned in the circulation, by removing instantly so great a portion of the body, cannot but produce some immediate fatal disorder and congestion. 4. The extent of cartilage and synovial apparatus must prove an almost insuperable obstacle to re-union. 5. The mutilation inflicted *renders life miserable* and not desirable. 6. The operation is *never necessary*.

In answer to the four first of these objections, Mr. Syme appeals to the case of William Fraser (his late patient).

1. He was weak and emaciated to an extraordinary degree, yet he stood the shock well. 2. Notwithstanding the extreme vascularity of the limb, the hæmorrhage did not exceed a few ounces. 3. Though the limb removed, owing to its having so long engrossed the attention of the system, may be regarded an equivalent to *half* of the body, no immediate disorder occurred in the circulation. 4. The wound healed kindly and soundly over the acetabulum.

After other appropriate remarks in refutation of the illogical reasoning of the above conjectures, Mr. Syme concludes by observing that, he is no advocate for operations whose only interest is the knife, which, however, he admits to be too often a great, though no less a necessary evil.

"Yet," he observes, "I feel no hesitation in recommending, to the serious attention of operating surgeons, amputation at the hip-joint, although it be the greatest and bloodiest operation in surgery, as I am quite sure that there is sometimes no other mode of prolonging existence."

Mr. Syme says, he firmly believes, that, if the operation be done properly and, above all, quickly, its success will be general, if not uniform.—*(See our Hospital Reports, page 47, for a recent case.)*

MEDICO-CHIRURGICAL TRANSACTIONS. Vol. XII. Part II.

(Continued from Page 26.)

On the Anatomy of the Eye. By Dr. JACOB, *of the University of Dublin.*—The author of this excellent paper is well known as the discoverer of a delicate membrane, between the choroid coat and the retina, now usually called *Tunica Jacobi*, and which is here for the first time beautifully figured. He has undertaken, in this Essay, to investigate some of the points connected with the anatomy of the eye, which have been rendered interesting by the difference of opinion among scientific anatomists. The first point he takes up is,

The passage of the Optic Nerve through the Sclerotica.—Dr. Jacob thinks that the so-called *lamina cribrosa* is nothing else than the extremity of the optic nerve, where the firmer tubercular portion is discontinued. Besides, if the sheath of the nerve be slit up through the sclerotic into the globe of the eye, the nerve does not appear to cease with a rounded apex behind the lamina cribrosa, as has been represented, but is obviously continuous without any line of separation. Again, the lamina cribrosa, as it is called, has the same white colour as the nerve, and if compared with a section of the nerve at some distance, is not to be distinguished. It appears, therefore, that Albinus, Haller, Zinn, Cuvier, C. Bell, and others, have made a mistake in their descriptions, probably, from washing away the retina, and cutting off the nerve on the outside close to the sclerotica.

Canal of Petit.—The canal of Petit, according to Dr. Jacob, is formed in consequence of the folds of the corona ciliaris, consisting of two layers of hyaloid membrane, receiving injected air from one to another. That the capsule of the lens has no share (though the contrary is usually believed) in the formation of the canal of Petit, he concluded from filling the canal with air, keeping it some days in water, and then, with great care, removing the lens included in its capsule, when he found that the air did not escape from the cells, and he could pass a small probe all round in this canal.

Aqua Morgagni.—Dr. Jacob seems to talk doubtfully of the existence of this fluid, except in a state of disease, or after death. In the eyes of sheep or oxen, while yet warm, no trace of it is to be found, though it collects in them soon after death. When it exists at all, he thinks it is confined to the anterior part.

Membrane of the Aqueous Humour.—The author thinks the lining membrane of the cornea is precisely similar to the capsule of the lens in its elasticity, and almost indestructible transparency. It is best seen in the eye of the horse, and can be detached in shreds, merely by scraping it. [See the following article on the Iris.]

Yellow Spot, Fold, or Foramen, of Soemmerring.—On examining under water the eye of a young man, five hours after death, the cornea and iris being cut away, and the lens removed from its place, "the optic nerve presented unequivocally the appearance of being drawn or folded, in form of a cross or star, with a dark speck in the centre, surrounded by a pale, yellow areola." The promi-

nence of the fold was also ascertained by its shadow. No hole could be discovered where the dark speck was; for even after some days maceration in water, a probe could not be passed without tearing the membrane. On floating the membrane in water, after removing the nervous matter by maceration and agitation, the situation of the spot could no longer be ascertained.

Structure of the Iris.—The muscularity of the iris has long been a subject of keen dispute. The tissue of posterior radiating striæ, which Manoir and others suppose to be muscles, Dr. Jacob proved to be vessels, by successfully injecting them; and he inclines to think, that the muscular power probably resides in the remarkable structure in front. He has presented beautiful preparations in proof of this, to the Hunterian Museum. He has also demonstrated, that the black pigment behind the iris is confined by a very delicate membrane, which Dr. Jacob is seemingly of opinion, is the secreting membrane of the aqueous humour.

Membrana Pupillaris.—Dr. Jacob's observations have led him to reject the idea that this membrane disappears about the seventh month, or that it is destroyed by a rent, as supposed by Blumenbach. He has usually found it present in most newborn infants, and gives a fine drawing of an injected one of the ninth month. He says the vessels become first obliterated, and then the membrane is absorbed.

On the Cause of Formation of Worms in the Human Intestines, &c. &c.

(Concluded from Page 25.)

Another observation, not less interesting, is of the following purport:

"For thirty years and more, I have known a lady, still a well-looking, healthy woman, who has given birth to a dozen of vigorous children, six boys and six girls. Whenever this lady was pregnant of a girl, she was constantly drawn away by an irresistible appetite to rich, milky, and mealy food; at the same time she was afflicted with the usual accidents of worm diseases; nay, until her lying-in, she was sometimes found to have evacuated several maw-worms. Whenever she was pregnant with a boy, none of these incidents ever happened; on the contrary, she felt, in this case, an invincible dislike to these nutriments. At last, a six-times repeated lying-in had taught her, at every following confinement, with amazing exactness, to foretel the sex of the infant."

But, how evidently soever these two related instances seem to prove that the abundant use of milky and mealy food is an inducing cause to the formation of worms, yet we can never look upon this otherwise than as its being only the one factor, or rather the half of the one factor, namely, of the substantial one, and still the individual bodily constitution remains an object of peculiar interest; for it is only when this is likewise calculated for the formation of worms, that such a formation actually can take place. The dish of pease or lentils, which appeases the stomach of the day-labourer, certainly will not be more flatulent than the pease or lentil soup of which the hypochondriac scarcely takes a mouthful. Nevertheless, the first does not feel from this the least oppression; his bowels remain unhurt, whilst the latter is tormented in such a manner, by some cubic inches of air that cannot easily find their issue, as if he were to be delivered of the antichrist. In this very same manner the nutriments, with regard to the formation of worms, operate very differently in the different bodily constitutions. In Tyrol, the country people make use of flesh meats in their meals, only four or five times a year, and yet, for aught I know, they are not very particularly afflicted with worm diseases. The nourishment of the convicts in the house of correction in this place (Vienna) consists merely of legumin-

ous and mealy food, and with this they are compelled to labour, and even very hard; which they also often do in the open air, the good quality of which is particularly taken care of. Counsellor Guldener administered to this house, in the quality of physician, during the space of fourteen years, and assured me, that among those prisoners worm diseases but very seldom occurred. Milk, and its products, butter and cheese, as we have already observed, then, would perhaps be the only nutriment which, much more than any other food, could be looked upon as favouring the formation of worms. Moreover, of all sorts of vegetable and animal substances, milk seems to be the richest in nutritive essence. The frequent and early formation of the cheese-mites, already strongly speaks in favour of this supposition, though I only communicate it as such, and by no means intend to give it as a fact.

One instance, however, I am fully convinced of. It is this, that a meagre diet, or such a one as produces but little nutrition, is not at all favourable to the formation of worms, especially of ascarides, and that worms never know a greater foe to them than the starving stomach of the body that harbours them. Upwards of two hundred carp *(Cyprinus carpio, L.)*, and almost five hundred tench *(Cyprin. Tinca. L.)*, have been submitted to our examination. Only half a dozen of the latter were found to contain worms. It is true, some carps also were found with worms, but they were only such as are caught fresh in an adjacent lake, and brought to market here under the name of sea-carps. Of all the Danube carps, there was not a single one with worms. The tenches and carps, however, which the city of Vienna is usually supplied with, are generally caught in ponds, from thence brought to this place, and during a pretty long time kept in cauls on the Danube, in order to free them from a certain muddy taste, which they get in the ponds. During this watering or freshing, they are starving, and very often there is not the least track to be found in their entrails of that slimy substance commonly observed in other fishes of their species. It may be said, that their entrails have been washed out, whereas those of other fishes newly caught in the Danube, for instance those of the barbels *(Cyprin. Barbus L.)* are thickly cast over with slime, but also are often entirely crammed up with worms. A few years ago, some gold fishes were caught in a free fish-pond, near Schönbrunn, and put into a glass with clear water. Most of them died some days afterwards. In one of them, a worm had not only worked itself through the intestines, but also through the muscles and the skin of the fish; meeting with no nourishment in the water, and finding, out of the animal body, the end of its creation, probably while its hinder part was still fixed within the body of the fish, it returned to it again, and from without pierced through it. Thus hanging at the outside of the fish, it is still shown in the collection of *naturalia* of this place. In other fishes these worms had only worked themselves through the entrails, and were hanging either at the inner side of the belly, or at the outside of the bowels. In the imperial cabinet of natural curiosities at Vienna, there is kept throughout the whole fine season, a vast quantity of birds, of all descriptions and species, for the purpose of establishing new researches into natural history. In those birds, which during a considerable length of time are kept in cages, there have very seldom been found any worms; but it is also here to be observed, that with

all possible care and trouble, one cannot get them the very same food which they procure themselves, when in the state of natural liberty.

If, then, a bad quality of food, generally is to be considered as a cause of the formation of worms, we may not bring under this head any such diet, which upon the whole affords too little nutrition, but solely that food, which, though producing a sufficient, nay, with regard to the body that takes it, a superfluous quantity of nutritive substances, yet cannot be duly prepared by the stomach, nor its separated nutritive substances be entirely taken up by the absorbent vessels, and rendered homogenial with the mass of the human body, in this case given. The very same dish, consisting of potatoes, pease, lentils, beans, and other leguminous or mealy food, which affords a most excellent nourishment to the laborious countryman, would, by a frequent use of them, cause worm diseases, besides a great many other complaints, to the idle and more feeble citizen.

Moreover, the notion that leguminous or mealy food should be less nourishing than fresh meats, is a mere prejudice of the modern schools. The above-mentioned instance, relating to the inhabitants of Tyrol, who certainly are a stout, healthy, vigorous set of people, is sufficient to remove every doubt on this subject.

In former times it was likewise supposed, that the seed of worms was brought into the human body by the use of worm-eaten fruit, the dirt of any such worm abiding inside the fruit being considered as being its egg; a supposition which, in our present times, certainly does not require any refutation.

However, if once worms are formed out of themselves, or if they have procreated themselves within the human body, they can, even when the causes that first brought on their formation are removed, propagate by copulation, since all worms, known to abide in the intestines, are provided with genital organs. But to this propagation circumstances must also be favourable; so, for instance, we see in children very often worms, that during a long while baffled all possible antidotes, disappear of themselves, when those children are ripening to a more mature age. In the same manner we see them extinguished in adults, whenever any change, either of clime or diet, takes place with them. Human diseases, or any distempers, are not seldom contributive also to the destruction of worms, of which the following part of this work will afford me an opportunity to communicate some examples.

On the Condensation of the Gases. By Mr. Faraday.—The discovery of the condensation of the Gases, by Mr. Faraday, of the Royal Institution, is highly worthy of notice, both from its singularity and from the results to which it may lead.

Sulphurous Acid, he found to be a very limpid, colourless fluid, and remaining so at 0° Fahr. When a sealed tube containing it was opened, part of it evaporated rapidly, cooling by its evaporation the other part, which however also dissipated in vapours, emitting the odour of sulphurous acid, and leaving the tube quite dry. A piece of ice dropped in the fluid acid made it boil, from the heat extricated by their union.

Sulphuretted Hydrogen is also a colourless and very limpid fluid. When exposed to the air, it immediately rushed into vapour, the pressure of which seemed nearly equal to that of 17 atmospheres at the temperature of 50°. At 0° the acid continues in the fluid state.

Carbonic Acid is a limpid, colour-

less matter, extremely fluid, and distils readily and rapidly at the difference of temperature between 32° and 0°. It remains liquid at the greatest cold to which it has been subjected. Its vapours exert a pressure of 36 atmospheres at 32°.

Euchlorine, is a very fluid, transparent substance, of a deep yellow colour, which, when exposed to the air, instantly passes off in vapour, causing the tube containing it to burst with considerable violence.

Nitrous Oxide is a very limpid colourless fluid, and so volatile that the warmth of the hand makes it easily pass into vapour, which is again rapidly condensed by the application of a mixture of ice and salt. It boils by the difference of temperature between 50° and 0°. It remains fluid at 10°; when a tube containing it is opened at one end, it immediately rushes out in the form of vapour, the pressure of which is equal to about fifty atmospheres, at 45°.

Cyanogen is a limpid, colourless fluid, remaining so at 3°. When the tube in which it was prepared was opened, the expansion within did not appear to be very great, and the liquid passed with comparative slowness into vapour, but producing great cold. The fluid acid does not at first mix with water, but floats on it.

Ammonia.—Chloride, or muriate of silver, possesses the property of absorbing a large quantity of ammonical gas, which it gives off when heated to about 100°. When a portion of this compound was put into a bent tube, afterwards hermetically sealed, and was heated, it gave off the alkali, which condensed in the opposite limb, kept cold by ice. Liquid ammonia, as thus prepared, is transparent and colourless; but, as the chloride cools, it immediately passes off in vapour and combines with it, producing a curious combination of effects. The chloride, by absorption of the vapour, has its temperature elevated nearly to 100°: while at the distance of a few inches, considerable cold is produced by the evaporation of the ammonia.

Muriatic Acid is a colourless fluid, passing off in vapour on exposure to air, the pressure of which is equal to nearly forty atmospheres, at the temperature of 50°.

Metamorphosis of Vegetables into Animals. By M. Gaillon.*—"It has been ascertained by several naturalists, that a great number of the *confervæ* are disorganised during the summer, and that the greenish globules, which are seen in their interior, become animalculæ, which swim for a certain period in water, are susceptible of irritation on being touched, &c. &c.; and, at the end, reunite themselves to form new *confervæ*. M. Gaillon, in his new memoir, presented to the Institute of France, has made observations, which fully confirm those previously made on this singular order of beings, which seem to destroy all traces of the distinction so feebly marked between the animal and vegetable creation. The species, to which he has applied his researches, is the genus ceramion of Decandolle. Dillwyn has described them under the name of conferva comoides. They cover the mud on the sea-coast at Dieppe. The corpuscles, which are of a greenish colour, M. Gaillon has observed, leave the filaments of the conferva comoides at frequent intervals, and assuming the form sometimes of an oval, sometime of a parallelogram, move about slowly or rapidly, and change their direction, like the cyclades and other animals of that class. He has even forced these corpuscles from the

* Revue Medicale.

filaments before their time, and has observed the same phenomena. M. Mertens, a celebrated botanist of Germany, has made the same observations. Last year he exhibited, to several *scavans*, the conferva mutabilis; on the 2d of August, in the state of a plant; on the 5th, disorganised, in the form of molecules, possessing the power of locomotion; reunited on the 6th, in the form of simple articulation; and, on the 11th, constituted again, in their primitive form."

HEADS *of* SURGICAL LECTURES, *delivered by* SIR A. COOPER, Bart. *at* ST. THOMAS'S HOSPITAL.

(Continued from page 30.)

"The three operations before observed, which are occasionally resorted to in the cure of hydrocele, are seton, incision, and injection.—Setons, however, are very rarely used, although now and then they are not without their advantage.—The seton should be made in the following manner, viz. take a curved needle and carry it into the scrotum and tunica vaginalis, just at the point where the trocar had been previously introduced, and include two inches above the point where the needle enters and bring it out sufficiently long. From this mode of operating inflammation generally ensues, as the water gradually escapes, adhesion of the tunica vaginalis proceeded—this operation, however, has been abandoned for better means, and is only used in those young persons whose hydroceles do not give way to the absorbent plan.

"The next plan of operating is by incision; but that by injection has superseded all others, for which we are indebted to Sir James Earle, who, thinking on this subject, conceived that injection of the tunica vaginalis was likely to be the best means of producing an adhesion and preventing the further formation of the disease.

OPERATION, &c. BY INJECTION.—"The instruments required for this operation are an elastic bottle with a stop-cock, a trocar and canula. The elastic bottle should be of a moderate size, and only half the fluid contained in it should be thrown in at a time, lest the action of the cremaster should force a part of it into the cellular tissue. Should this happen, inflammation and sloughing are likely to take place around the part at which the canula is introduced. The trocar should be two inches long, and the canula should be of a small size. The trocar and canula, after used, should be put separately into the box, or they will soon contract rust, and be unfit for use.

"The fluid used for the injection should be of the stimulant kind. If port wine be used it should be added to an equal quantity of water. If, however, it be old port, the proportions may be five parts of wine with three of water—but, should the former be such as is usually procured at taverns and wine-vaults, a less proportion of it must be used, in consequence of the astringent ingredient with which it is commonly found adulterated, as otherwise the injection would be too stimulating. Brandy or spirits of wine may also be employed—if the latter, one part to fifteen of water. The injection generally used in this hospital is the sulphate of zinc, in the proportion of one drachm to a pint of water,—and this, because we are better enabled to judge of its degree of strength, than that of others which are subject to much variation.

"It must not, however, be supposed that one fluid will answer as well as another; for I remember a case in which an injection of milk

was used, on the supposition of its being a bland fluid, that produced the most horrible inflammation. Be upon your guard, therefore, against making experiments of this kind.

"When you inject for hydrocele, the patient should be placed in the recumbent posture, which will enable you to perform the operation more steadily; and, before the trocar and canula are introduced, make it a rule to squeeze the scrotum and tunica vaginalis, so as to render the part containing the fluid more distinct and tense—the trocar and canula are then to be obliquely introduced, after the same manner as in the palliative mode of treatment.—Having passed the trocar and canula into the tunica vaginalis, withdraw the former and push the latter alone carefully upwards, to guard against doing any injury to the testicles or spermatic cord. The tunica vaginalis should be nipped round the canula to prevent the instrument from being diverted, and thus injecting a portion of the fluid into the cellular membrane. This precaution being taken, the injection is to be gradually thrown up, the stop-cock turned to confine it within the tunica vaginalis, and the scrotum must be moved from side to side, in order to diffuse the the fluid over every part of the surface, which should be suffered to remain about four or five minutes."

(Hydrocele to be concluded in our next.)

TO THE EDITORS OF THE MEDICO-CHIRURGICAL REVIEW, &c. &c.

Gentlemen.—As a reader of, and subscriber to, your respectable and spirited weekly publication, I trust, for the honour of the senior, as well as of the junior portion of the profession, who are the most apt to be misled, you will favour me with inserting, as early as possible, the following plump refutation of a barefaced falsehood, however derogatory to your dignity it may be to notice the scurrilous object that gives rise to it, viz. a late spurious periodical, that set out with levelling its calumnious innuendoes against the most respectable and most worthy and irreproachable characters, to attract a transient notice. The *work* in question, without further animadversion, will stand sufficiently identified in the following *œdematous* paragraph—the following vitiated piece of *fungus*, piping hot from the corner of Norfolk-street, in the Strand, (which lately appeared in a bloated preface to the work,) *not a hundred miles* from Messrs. Newbury and Co.'s &c. &c.

"An attempt has been made by some of the members of the profession," says the sapient would-be invisible great-little-man, "to create a prejudice against the L-NC-T, because *its conductors* are unknown—and it is their intention to remain so!!!"

Now, gentlemen, to give this consequential nothingness another *stab;* or rather, to *strike a light* on the subject, be it known to all whom it may concern, that the "*unknown conductors*" of the L-NC-T, who have "opened communications with France, Italy, and Germany," or, what is more apparent, with St. Giles', Billingsgate, and the back slums of the Seven Dials, is neither less nor more than the identical *Mister* WAKELY, of the aforesaid place, under the same tenement with the aforesaid Messrs. Newbury and Co. Norfolk-street, Strand—the identical Mister WAKELY, in fact, who received a severe *stab* from *some Ruthless* hand, the night his house was *set* on fire!!!!

Although, Gentlemen, I cannot, at the present moment, exactly refer your readers to the precise date of these disastrous circumstances, yet, I pledge myself, on some future and not very distant oc-

casion, to give the history of them in full detail, for the satisfaction of the medical world, whose curiosity must naturally have been excited at the preceding *mysterious* assertion, which very much reminds me of the fable of the ASS cramming its head into a bush; thence arguing, that, because *Neddy* saw nothing himself, he was seen by no one. But MISTER WAKELY is not the first phœnix we have heard of that has been *regenerated in its own ashes.* Let us hope, however, that the "*dog* will not return to his vomit.!" To be brief, the *conductors* of the L—nc—t are now known—the lion's skin is now doff'd, and the calf's now substituted; and, let *Mister* WAKELY, who has lately begun to out-ape pedantry itself, by quoting *dog Latin*, writing bad French, and worse English, remember that "*la charité bien ordonné commence chez soi.*"* Again, if *Mister* Wakely, of Norfolk-street, in the Strand, (the *conductors* of the ———) has not already *burnt* his fingers by making too free with his *combustibles*, we would recommend him, now he is rendered both visible and tangible, to constrain those sudden *sparks* of *wit*, those hasty *flashes* of *humour*, which, not with him alone, have set both chairs, tables, and houses in an *uproar*, before the *extinguisher* could counteract the *blaze* of destruction.

Gentlemen—If the aforesaid *Mister* WAKELY, who, by the bye, is neither surgeon nor sailor, says, that he is not the "*conductors*" of the L—nc—t, I am ready to prove that he is; and, what is more, you are welcome, if you choose, should *Mister* WAKELY himself apply for it, in *propria forma atque persona*, to give him my address; strictly, however, enjoining him, should he be disposed to call visibly upon me, to be so kind as to leave his *Lancet* and *Tinder-box* at home.

If you insert this, gentlemen, in your columns, I promise, in return for the attention, to keep a bright eye upon *Mister* W——— and to let you hear from me again, in a very short time.*

Yours, &c. "PEEPING TOM."

Tottenham, Jan. 12.

* "Those who keep glass-houses should never throw stones;" *vulgo*, "charity begins at home."

PHRENOLOGICAL OBSERVATIONS, *&c. on the Head of* THURTELL.

(Continued from page 32.)

It is with some reluctance we return to this subject; but, as a stupid, nonsensical, and contradictory article, from the pen of a Dr. Burnet, M. D., has been copied into a number of newspapers, we cannot suffer the imposition to pass without offering a refutation to some of the absurdities contained in it. In the first place, we are convinced that no physician, deputed by the Phrenological Society, could have drawn any other inference than such as are compatible with the doctrine of organology; and, secondly, to be enabled to do so, the physician in question should have been an accredited as well as a qualified person; in this case, his name would have been coupled with that of his learned friend—but, as arguments were wanting as well as proofs, it was quite enough for the purpose of a catchpenny publication, to make assertions which it would never be called upon to substantiate. So much for Dr. Burnet and his phrenological physician, if, actually, there

* We have, from time to time, received a variety of rather odd communications from this self-said "PEEPING-TOM," of Tottenham; who appears, by the bye, to be an active prying sort of a character: but who the *Mister* WAKELY may be, forsooth, to whom Tom alludes, we are as ignorant hitherto as the man in the Moon.—Perhaps Tom is playing off a hoax upon us. *N'importe. Ed.*

does exist one, as described, beyond the fumes of the doctor's warm and moist imagination.

Admitting, then, that Thurtell's head exhibited the organs of BENEVOLENCE, FIRMNESS, COURAGE, IDEALITY, DESTRUCTIVENESS; the preponderance of the higher sentiments over the last, which does not require an enormous developement, in no manner does away with the propensity assigned to it; for, as GALL observes, *L'on ne doit pas s'attendre à trouver chez tout les meurtriers un grand developement de l'organe carnassier.*

"There are unfortunate circumstances," observes the same author, "where an organ even moderately developed, may receive such incitement as to acquire a high degree of activity."

There are, consequently, many circumstances that may bring an organ, apparently under the influence of those of a superior order, into action—the organs, distinctly, may also be diseased, from a variety of exciting causes; and, doubtless, it is under this influence that each may receive an extraordinary accumulation of energy. Neither should it be forgotten, that the same degree of activity in one organ, must always produce actions entirely different with different individuals. Dr. Gall observes, that—

"If we make an exception in cases of idiotism and mania, or of an entirely circumscribed incitement, the actions are never determined by the activity of a single organ. The manifestation of a certain force will be different, according as the action of the other organs is more or less strong, or differently modified."

These, with various other reasons, are sufficient to shew that we are not always to look for a large developement of the organ of destructiveness in every individual who may have been led away, from various motives, to commit a murder; and who might not have been disposed to it by his primitive organization. "It is also for this reason," says Dr. Gall, "that I am far from considering a person disposed to commit a murder, because I find the organ of this instinct very much developed in him."

All then that can be safely said on this subject is, that external circumstances being equal, an individual, in whom the organ of destructiveness is strongly marked, will commit a murder with more facility than another, whom nature has not disposed to such an act, by his organization. Amid the tumult of violent passions, transported with jealousy, rage, vengeance, &c. the idea of revenge will sooner present itself to the first than to the latter; whose ideas, on the contrary, will tend to take a different direction.

On this subject there might be no end to digression. But that the murder of Weare was premeditated no one now can doubt; and by whom might it first have been suggested? Perhaps not by the individual who actually committed it. Let us suppose, then, that the horrid and revolting deed was first proposed by Hunt, who, it is understood, has the organ of courage very indifferently, if at all developed; but in whom that of destructiveness may still not be larger than in Thurtell, whose organs of courage, on the contrary, is recognised. The first then planned and abetted, but from the want of courage, left the deed to Thurtell, who was more courageous than himself.

Some have asserted, though without the least foundation, that Thurtell has the organ of cautiousness equally developed with the other organ. This, however, is not the case; and the absence of fear manifested by him, which is so familiar to those in whom this organ is present, may tend to confirm this observation. The faculty, in question, as already observed, produces doubts,

hesitation, caution, circumspection, or timidity and fear, in the degree in which it is possessed, and the other faculties with which it is combined. It is, moreover, an essential ingredient in a prudent character —a distinction to which we are not told Thurtell was ever entitled.

With respect to the presence of the other organs found developed in Thurtell's head, that of benevolence is certainly apparent; and this he confirmed before his execution, by the readiness and warmth with which he forgave Hunt, who had betrayed him; in fact, who was the means of hastening his untimely end. Ideality may be inferred from his enthusiasm of gaming and pugilism, and his attempts at oratory—but it was not combined with caution; therefore, both the serious and the sublime were wanting. Combativeness is admitted, and in somewhat a stronger degree than destructiveness; and it is generally found large in persons who have murdered from the impulse of the moment—and, as destructiveness, however large or small, leads only to crime when too energetic, the union of the two may exert a reciprocal influence over each other, carrying either the one or the *other* to the *ne plus ultra* of activity—(murder) sooner than if only one of them were developed. For Gall remarks that, in proportion as a strong activity of the organ of the instinct to murder co-exists with one or several other qualities or faculties of equal activity, the action of this organ must necessarily be modified in a different manner. Co-existing with the love of fights or battles, it constitutes intrepidity even to temerity, &c. United with a high degree of lasciviousness, it leads to every species of blood-thirsty debauchery, &c. &c.

The busts and portraits of Caligula, Nero, Sylla the dictator; Septimus Severus, the most cruel and warlike of the Roman emperors; Charles the IXth. Richard Cœur de Lion, Philip the IId. of Spain, *bloody* Queen Mary the Ist. Catherine de Medicis, Ravillac; the famous pirate Storzenbecker, Archbishop Bonnet, &c. all bear the external mark of a cruel and sanguinary character. In fact, it is proved, by the natural history of men and animals, not only as regards man in a state of health, but also in a state of disease, that the murderous or carnivorous instinct, or in the more refined language of Spurtzheim, of destructiveness, is an innate primitive power, consequently a fundamental quality resulting from a particular cerebral developement, placed directly above the ears of the greater number of carnivorous and omnivorous animals; subject, however, to modification and variety, in proportion as it may be influenced either by the superior intellectual faculties or the animal qualities, &c.

We shall conclude this article, for the present, by recommending Dr. Alexander Burnet, M.D. and his Phrenological friend, to examine the doctrine a little closer before they pronounce upon its merits or defects—and, if these gentlemen should take a *cup* of prejudice too much on their way, or if they have drawn too hasty conclusions from their first visit to THURTELL'S HEAD, we would advise them to return more *soberly*, and then tell the world over again all they know about it. F.

PROCEEDINGS OF

PHILOSOPHICAL SOCIETIES.

(Continued from page 14.)

The *winter birds of passage* leave this country for precisely the same reason that impels the *spring migrators* to come hither; some of them, as the wild-duck and the wood-pigeon, which occasionally build

here, are irregular in their migration; the most regular are the red-wing and the field-fare, of whose building in this country Dr. Jenner never met with an instance. The food of the former, he observes, is not haws, or the fruit of the white thorn, as has been stated, but worms and insects, which they gather from the ground, feeding in flocks; Dr. J. had seen them dying of famine when haws were abundant. A gentleman saw a flock of field-fares on the day before the thawing of the great frost of 1794, and they seemed as wild and vigorous as if in season; he shot one which Dr. Jenner examined, and found to be in excellent condition, but there was no food in the stomach, and the last which the animal had eaten was digested: now as the ground was covered with snow, and as the long frost had destroyed every thing they could feed on, these field-fares must have returned here for a short time, in consequence of the inclemency of the weather abroad. Red-wings and field-fares always leave this country when they are in the best condition. The approach of severe frost is indicated by the arrival of water-birds, as that of thaw is by the coming of the spring migrators. Birds often outstrip in their migrations the progress of the frost itself.

Dr. Jenner considers that Dr. Darwin must be mistaken in what he says respecting cuckoos seen feeding their young. The birds in question must have been goat-suckers, which are very easily confounded with cuckoos by those who are not fully conversant with the characters of their plumage, &c.

This very interesting paper concludes with a recapitulation of the principal facts contained in it, and of the author's views respecting them.

Calcutta Medical and Physical Society.

The objects of this recently established Society, is the advancement of professional knowledge, for the mutual benefit of the members, more particularly with reference to Indian diseases and treatment; and the promoting, by every means in their power, the study of such branches of natural history as are connected with the practice of medicine, or lead to medical research. The Society is open to all other medical men, of whatever denomination or country.

Among a variety of other resolutions agreed to, it was further resolved, that, Drs. Hare, Mellis, and Adam, be nominated President, Vice-President, and Secretary to the Society. The next meeting of the Society will be held on Saturday the 15th of March.

The Society invites communications generally on the following topics:—

1st, Meteorology and medical topography of the various districts of India, and the peculiarities of the inhabitants of each, with reference to their physical configuration.

2d, The diseases of the country, as they affect both Europeans and natives, with their treatment, adhering closely to ascertained facts, and deriving them, if possible, from local and personal experience.

3d, The diseases peculiar to natives, and the mode of treatment followed by native practitioners, together with the received opinions as to their nature and causes.

4th, Description of surgical instruments, and the mode of operating among the natives.

5th, The materia medica of Hindostan, whether animals, vegetable, or mineral productions of the country, or artificial compounds, employed in native practice, with their chemical analysis.

6th, The history of medical science, in general, in the east, both in its past and present condition.

7th, Descriptions of plants unknown to the botany of Europe, either with or without reference to their medical virtues.

8th, Descriptions of animals, either unknown to, or but imperfectly described by, European zoologists.

9th, Account of diseases affecting the lower animals, as the horse, camel, and others, more particularly valuable from their services to man.

10th, Dissections of all the varieties of animals, with their peculiarities of structure, and whatever is comprehended under the term of comparative anatomy.

The little progress hitherto made towards the history of diseases peculiar to this climate, or of the modifications of those known in other parts of the world, must render this society a desideratum of considerable importance to the medical world, both at home and abroad; and, although the difficulties in the way of improvement, which are every where considerable, be exceedingly augmented in this hemisphere, (India)

from the want of books, and the great distance from each other, at which medical men are placed, they surely cannot be insurmountable. In the extensive and so varied a field as this vast empire, stimulated by every inducement that can render this profession honourable to ourselves, or beneficial to mankind, the interchange of knowledge and opinion here proposed requires only cordiality, to make us agreeable and delightful to individuals, as profitable to the community. F.

HOSPITAL REPORTS.

Guy's Hospital. *Jan.* 16.—*Amputation at the Hip-joint.*—This Herculean operation, which was only noticed in our preceding number, in consequence of its unexpected occurrence, left us no time to lay an account of it before our readers. This week, however, we not only give the details of the case, but of a similar and successful one performed, a short time back, at Edinburgh. (See page 33).

If we are correctly informed, it is also the first operation of the kind performed at this hospital. The patient, in the present instance, is upwards of 40 years of age, who, some years ago, had been amputated above the knee; since which time the thigh-bone had become the seat of extensive disease, from the end of the stump as far up as the trochanter major, and had so excessively debilitated his constitution, that he was evidently sinking under its influence.

At a quarter past one, the patient, by his own consent, was carried into the operating theatre, and placed on the table, in the horizontal posture. The operator (Sir A. Cooper), having also taken up his position, and the femoral artery being regularly and firmly compressed by Mr. Key, the operation was commenced, by making an incision through the skin and cellular membrane, just below Poupart's ligament, a little to the iliac side of the arteria femoralis, which (the incision) was continued downwards and outwards, to the back part of the thigh, about one third of the way down. The point of the knife was now carried in the opposite direction, obliquely upwards and inwards, to meet the origin of the first incision; which, being effected, formed somewhat of an elliptical curve. After a short pause, the femoral artery was divided, and a ligature without much difficulty applied. The catlin was now carried in the direction of the first incision, and the muscles divided. It was here found necessary to take up the arteræa profunda. Having waited a short time to see whether there were any bleeding vessels, the circumflex was included in a ligature, with another small vessel. The operation was then continued and completed by the removal of the head of the femur from the acetabulum, in as safe and as dexterous a manner as it was possible to conceive. Four ligatures were all that were applied. The integuments were brought in contact, and the upper part held there by means of a single stitch—adhesive strapping confined the remaining part—over which, and round the loins, a roller was applied. The hæmorrhage was comparatively of a trifling nature—and the blood lost had a venous appearance. The operation, as far as we were enabled to judge, did not occupy half-an-hour. The patient, who bore the operation with extraordinary fortitude, became frequently so faint and so much exhausted, that it was necessary to supply him with a considerable portion of wine; brandy was also ordered to be given him, but refused; and the wine itself, with difficulty, after the first or second time, would be taken. The man was removed to the ward in good spirits, having previously thanked Sir A., in the most grateful manner, for the attention paid him during the operation; remarking, at the same time, that it was "the hardest day's work he had ever gone through;" to which Sir Astley replied, "perhaps it might, but that it was not the hardest he had ever had."

Jan. 23.—Friday, Two o'clock.—Up to this hour, (when we last saw the patient) the case is doing extremely well—not the least untoward occurrence having interfered. The stump is granulating fast, and the adhesive process is indicated about the flap. An opiate at night is all that is ordered, with attention, at the same time, to the state of the bowels, which are in a regular and comfortable condition. Since the operation, the ward has been kept very tranquil, with the outer door shut; in order to exclude every kind of interruption to this desirable object.

Mr. Morgan, the new-elected surgeon, in the room of Mr. Lucas (retired from bad health) performed his maiden operation here this day, by removing a large steatomatous tumour from the breast of a woman; also one of the melicerous kind from the inner edge of the fore-arm of another female; and cut out a carcinomatous little lump from the lower lip of a lively-looking old man.

From the above specimens, however unimportant they may be, we are inclined to augur favourably of Mr. Morgan as an operator. He goes to work with coolness,

an indispensible requisite in an operating surgeon, and handles the knife with considerable address.

Mr. Morgan was duly initiated by the blood, from the first artery he divided, having spirted directly on his face, giving the countenance a singularly cribriform appearance, to the no small *jollification* of the theatre, which was crowded to excess.

MELANGE.

Mineralogy and Geology.—The loss which the Academy sustained in the death of M. Hauy, occasioned an apprehension that the public might be deprived of the new edition of the work of that illustrious professor, on the science which he cultivated with so much success. Happily the whole of the manuscript was prepared. Five volumes have already appeared, and the impression of the sixth and last is going on, under the superintendence of M. De Lafosse, one of M. Hauy's most distinguished pupils.—M. Constant Prevost has been investigating, mineralogically, the bold rocky shore of Picardy and Normandy, from Calais to Cherburg.—*Acad. des Sciences.*

Cole's Patent Trusses.—I hereby certify that I have suffered twice the dangers of strangulated hernia, which had almost proved fatal. I placed myself under the care of an eminent surgeon, in this neighbourhood, from whom I learned that Mr. Coles, London Bridge, had given proofs of extraordinary talents in his profession; a truss was procured, which effected a pressure of at least sixteen pounds upon the hernia, which was not removed from the part for fourteen days and nights. He has since applied a bandage, which I have wore for a much longer period without removing it. It is with great satisfaction that I can inform those who may be similarly circumstanced, that I have not suffered a shadow of pain since I have been under his care.

John Martin, Licensed Victualler.
Dover-Castle Inn, Deptford.

I hereby certify that I have worn the trusses of Mr. Coles's invention for sixteen months past, and have found them more easy and more efficacious than any others which I had worn for fourteen years previously.

Carver Vickery, Surgeon, R. N.
London, Sep. 20, 1823.

* If a patient wishes to ascertain the pressure of a truss, let him find the diameter of his body, which, (in a middle size man, is about eight inches). Hold the truss in your hand, and suspend to the pad as many pounds weight as will open it eight inches, which will give you the exact pressure.

Vegetable Physics, and Botany.—M. Dutrochet has made some new and exceedingly curious experiments on the direction which the different parts of plants take, when in motion, from the instant of germination to their developement.—It is generally imagined that a tree, deprived of its bark, loses its vegetative faculty. M. Dupetit Thouars has peeled trees for three successive years, and they have sustained no injury. He thinks the elm endures this mutilation best; the oak cannot bear it.—M. Raffenau Delille has described a singular plant of the family of gourds. Its fruit, which is nearly two feet long, and of a proportionate thickness, is covered with a resinous and inflammable powder, that can be scraped off; and seems analogous to the vegetable wax of the *myrica cerifera* of North America, and of the *ceroxyluni andicola* in the Cordilleras.—Several numbers of splendid botanical works, by M. de Humboldt and M. Kunth, have appeared.—*Acad. des Sciences.*

BIRTH.—On the 4th inst. the lady of Dr. O'Brien, of Navan, of a son.

On the 17th inst. in the Lambeth-road, the lady of Mr. W. T. Iliff, Surgeon, of a son.

MARRIED.—On the 2d. ult. at St. Michael's, by his Britannic Majesty's Consul-general of the Azores, Dr. Sanderson Walker, F. R. C. P. to Emma Henrietta, third daughter to Captain G. Poplewell, of Sister's-cottage, Stoke Newington.

On the 15th inst. in Cornwall, John Henry Walker, Esq. Surgeon, Strand, to Mary Lyne, only daughter of the late Captain P. Lyne of Torfrey.

ADVERTISEMENT.

Just published, price 6d. pp. 48.

The RELIGIOUS USE OF BOTANY, being an Introduction to the Science. By R. J. Thornton, M. D.

Printed for J. Paul, 42, Holland-street, Southwark; sold by Sherwood, Neely, and Jones, and by all Booksellers.

TO CORRESPONDENTS.

Some alterations and changes are about to take place in the future management of this Magazine, which will be announced in the ensuing number; in consequence of which the paper received from Mr. S. will be withheld until the final arrangements are made. Also the valuable communications from L. D. and others.

London:

Printed by W. LEWIS, 21, *Finch-lane;* For the PROPRIETORS; and sold also by Sherwood, Neely, and Jones, Paternoster-Row; Simpkin and Marshall, Stationers'-Court; John Cox, Berner's-street, Oxford-Street; J. Shaw, Fetter-lane, Fleet-street; Callow and Wilson, Gerrard-Street, Soho; W. Stewart, South Bridge-Street, Edinburgh; J. Cameron, opposite the College, Glasgow; Hodges and M'Arthur, Dublin, &c. &c.

THE WEEKLY

Medico-Chirurgical Review & Philosophical MAGAZINE.

No. LII.] SATURDAY, JANUARY 31, 1824. [*Price 4d.*

"FLORIFERIS, UT APES, IN SALTIBUS OMNIA LIBANT
OMNIA NOS, ITIDEM, DEPASCIMUR AUREA DICTA."

On a new Phenomenon of Electromagnetism. By Sir HUMPHREY DAVY, *Bart. Pres. RS.**

On a subject so obscure as electromagnetism, and connected by analogies more or less distinct with the doctrines of heat, light, electricity, and chemical attraction, it is not difficult to frame *hypotheses;* but the science is in a state too near its infancy to expect the developement of any satisfactory *theory;* and its progress can only be ensured by new facts and experiments, which may prepare the way for extensive and general reasonings upon its principles. Influenced by this opinion, I am induced to lay before the Society an account of the electromagnetic phenomenon I observed about fifteen months ago in the laboratory of the Royal Institution, and which I have lately had an occasion of witnessing in a more perfect manner, through the kindness of Mr. Pepys, by the use of a large battery, constructed under his directions for the London Institution, and containing a pair of plates of about 200 square feet. In describing this phenomenon, I shall not enter into very minute details, because the experiments, which led to the discovery of it, are very simple, and, though more distinct with a large apparatus, yet it may be observed by the use of a pair of plates containing from 10 to 15 square feet.

Immediately after Mr. Faraday had published his ingenious experiments on electromagnetic rotation, I was induced to try the action of a magnet on mercury connected in the electrical circuit, hoping that, in this case, as there was no mechanical suspension of the conductor, the appearances would be exhibited in their most simple form; and I found that when two wires were placed in a basin of mercury perpendicular to the surface, and in the voltaic circuit of a battery with large plates; and the pole of a powerful magnet held either above or below the wires, the mercury immediately began to revolve round the wire as an axis, according to the common circumstances of electromagnetic rotation, and with a velocity exceedingly increased when the *opposite* poles of two magnets were used, one above, the other below.

Masses of mercury, of several inches in diameter were set in motion, and made to revolve in this manner, whenever the pole of the magnet was held near the perpendicular of the wire; but when the pole was held above the mercury between the two wires, the circular motion ceased; and currents took place in the mercury in opposite directions, one to the right and the other to the left of the magnet. These circumstances, and various others which it would be tedious to detail, induced me to believe that the passage of the electricity through the mercury produced motions independent of the action of the magnet; and that the

* From the Philosophical Transactions for 1823, Part II.

appearances which I have described were owing to a composition of forces.

I endeavoured to ascertain the existence of these motions in the mercury, by covering its surface with weak acids; and diffusing over it finely divided matter, such as the seeds of lycopodium, white oxide of mercury, &c. but without any distinct result. It then occurred to me, that from the position of the wires, currents, if they existed, must occur chiefly in the lower, and not the upper surface of the mercury; and I consequently inverted the form of the experiment. I had two copper wires, of about one-sixth of an inch in diameter, the extremities of which were flat and carefully polished, passed through two holes three inches apart in the bottom of a glass basin, and perpendicular to it; they were cemented into the basin, and made non-conductors by sealing-wax, except at their polished ends; the basin was then filled with mercury, which stood about a tenth or twelfth of an inch above the wires. The wires were now placed in a powerful voltaic circuit. The moment the contacts were made, *the phenomenon*, which is the principal object of this paper, occurred: the mercury was immediately seen in violent agitation; its surface became elevated into a small cone above each of the wires; waves flowed off in all directions from these cones; and the only point of rest was apparently where they met in the centre of the mercury between the two wires. On holding the pole of a powerful bar magnet at a considerable distance (some inches) above one of the cones, its apex was diminished and its base extended: by lowering the pole further, these effects were still further increased, and the undulations were feebler. At a smaller distance the surface of the mercury became plane; and rotation slowly began round the wire. As the magnet approached, the rotation became more rapid, and when it was about half an inch above the mercury, a great depression of it was observed above the wire, and a vortex, which reached almost to the surface of the wire.

In the first experiments which I made, the conical elevations or fountains of mercury were about the tenth or twelfth of an inch high, and the vortices apparently as low; but in the experiments made at the London Institution, the mercury being much higher above the wire, the elevations and depressions were much more considerable, amounting to the fifth or sixth of an inch. Of course the rotation took place with either pole of a magnet or either wire, or both together, according to the well-known circumstances which determine these effects.

To ascertain whether the communication of heat, diminishing the specific gravity of the mercury, had any share in these phenomena, I placed a delicate thermometer above one of the wires in the mercury, but there was no immediate elevation of temperature; the heat of the mercury gradually increased, as did that of the wires; but this increase was similar in every part of the circuit. I proved the same thing more distinctly, by making the whole apparatus a *thermometer*, terminating in a fine tube filled with mercury. At the first instant that the mercury became electromagnetic, there was no increase of its volume.

This phenomenon cannot be attributed to common electrical repulsion, for in the electromagnetic circuit, similar electrified conductors do not repel, but attract each other; and it is in the case in which conductors in

opposite states are brought near each other on surfaces of mercury, that repulsion takes place.

Nor can the effect be referred to that kind of action which occurs when electricity passes from good into bad conductors, as in the phenomena of points electrified in air, as the following facts seem to prove. Steel wires were substituted for copper wires, and the appearances were the same in kind, and only less in degree; without doubt, in consequence of a smaller quantity of electricity passing through the steel wires: and by comparing the conducting powers of equal cylinders of mercury and steel in glass tubes, by ascertaining the quantity of iron filings they attracted, it was found that the conducting powers of mercury were higher than those of steel; the first metal taking up fifty-eight grains of iron filings, and the second only thirty-seven.

Again: fused tin was substituted for mercury in a porcelain vessel into which wires of copper and steel were alternately ground and fixed: the elevations were produced as in the mercury, and the phenomena of rotation by the magnet; and it was found by direct experiment, that the conducting powers of the tin, at and just before its point of fusion, did not perceptibly differ, and that they were much higher than those of mercury. Lastly, the communication was made from the battery by two tubes having nearly the same diameter as the wires filled with mercury, so that the electricity, for some inches before it entered the basin, passed through mercury; and still the appearances continued the same.

From the rapidity of the undulations round the points of the cones, I thought they would put in motion any light bodies placed above the mercury; but I could not produce the slightest motion in a very light wheel hung on an axle; and when fine powders of any kind were strewed upon the surface, they merely underwent undulations, without any other change of place; and fine iron filings strewed on the top of the cone, arranged themselves in right lines at right angles to the line joining the two wires, and remained stationary, even on the centre of the cone. The effect, therefore, is of a novel kind, and in one respect seems analogous to that of the tides. It would appear as if the passage of the electricity diminished the action of gravity on the mercury. And that there is no change of volume of the whole mass of the mercury appears from the experiment, p. 24; and this was shown likewise by inclosing the apparatus in a kind of manometer, terminating in a fine tube containing air inclosed by oil; and which, by its expansion or contraction, would have shown the slightest change of volume in the mercury: none, however, took place when the contacts were alternately made and broken, unless the circuit was uninterrupted for a sufficient time to communicate sensible heat to the mercury.

This phenomenon, in which the same effects are produced at the two opposite poles, seems strongly opposed to the idea of the electromagnetic results being produced by the transition currents or motions of a single imponderable fluid.

On the conjectural part of the subject I shall not however enter, for the reasons stated in the beginning of this paper; but I cannot with propriety conclude, without mentioning a circumstance in the history of the progress of electromagnetism, which, though well known to many Fellows of this Society, has, I believe, never been made public, namely, that we owe to the sagacity of Dr. Wollaston, the first idea of the possibility of the rotations of the

electromagnetic wire round its axis, by the approach of a magnet; and I witnessed, early in 1821, an unsuccessful experiment which he made to produce the effect in the laboratory of the Royal Institution.

Case of severe Inflammatory Disease. *By* CHARLES LAW, *Esq. Surgeon.* [*Communicated through Dr.* BIRKBECK.]

On the 23d of last month (October), I was requested to see Maria B., aged 20, of a delicate habit, having been considerably reduced by a most severe inflammatory attack which she had experienced in April last. I found her complaining of great pain in the left hypochondrium, constant, and increased by pressure and full inspiration; bowels costive; mouth dry; tongue slightly coated; pulse not more frequent than usual, but rather more thrilling when pressed; skin below the ordinary warmth rather than above it, and without perspiration. I bled her to ℥xx. when she fainted, and ordered her to take, every four hours, ℥jss. of strong infusion of senna, with manna and Epsom salts, and at bed-time eight grains of the pulv. antimonialis.

On the 24th, she had passed several offensive and dark-coloured stools, and had slight vomiting: the pain was still severe; the blood was but slightly buffed. I again bled her to fainting, but obtained only ℥x. I directed 12 leeches to be applied to the seat of the pain, and the medicine to be continued as before.

On the 25th, the pain had left her, or nearly so; the bowels continued open, and the skin was moist. During the night she had vomited a clear fluid of a greenish hue, which came off the stomach without difficulty. She was now ordered ℈j. of carbonate of potass in a little cinnamon-water every six hours.

26th.—Continued easy, with the exception of a slight pain in the chest. The alkaline repeated, and aperient mixture occasionally.

27th. The pain in the chest had now become severe, and I ordered her eight leeches, five only of which were applied.

28th.—Pain in the chest much increased, and breathing difficult. I bled her freely till she fainted, and gave her the following draught:—

℞ Potass. Nitrat. gr. viij.
Liq. Antim. Tart. ℥xxx.
Syr. Croci. ℥ss.
Mistur. Camphor. ℥jss. M.
Ft. haustus, sextâ quâque horâ sumendus.

29th.—Much relieved, though still in pain upon a full inspiration. Continue the draught and aperient occasionally.

30th.—Much better, as far as the chest was concerned; but suffering from a most acute pain in the head, which would not allow of a moment's rest. I recommended her to allow her hair to be cut off all the hinder part of the head, leaving only two or three of the foremost ringlets; I likewise ordered 16 leeches about the forehead and temples. Medicine as before.

31st.—Head much relieved, and in hopes of a speedy recovery; but, at the same time, complaining of pain and heat in making water.

November 1st.—Head easy; heat of urine continuing, and a severe pain felt in the region of the kidneys. Ordered her to drink freely of barley-water, with gum arabic, to keep her bowels open, with the cathartic mixture, and every six hours to take the following:—

℞ Ol. Amygdal. ℥xl.
Mannæ Opt. ℥j.
Liq. Potass. ℥xv.
Aq. Pimentæ, ℥j. M.
Ft. haustus.

2d.—On going up stairs, I heard her groaning piteously, from the continuance of the pain in the loins, which was very severe. I again bled her as freely as I could, fainting occurring after she had lost about 16 ounces of blood. I ordered the draught to be continued, with the addition of 25 minims of tinct. hyoscyami.

3d.—She expressed herself easier in the lumbar region, but said her thighs were in great pain, and very tender when she moved or made an attempt to sit to take any thing.

4th.—Thighs very painful; back easier. Objecting to the oily draught, I substituted the following:—

℞ Sodæ Subcarbon. ℈j.
Tinct. Hyoscyam. ℳxxv.
Syr. Papaver. ℥j.
Aq. Cinnam. ℥x. M. ft. haustus.

I requested the application of a few leeches to any part of the thigh or thighs she might find most painful, and the use of warm fomentations afterwards.

5th.—Seven leeches had been applied to one thigh, which had bled freely, and to-day both thighs were less painful. Continue draught and fomentations.

6th.—Much better in every respect. Complained of occasional pains in the feet and legs. Add to each draught, tinct. colchici, ℳxl. To use the foot-bath three or four times a-day, and afterwards envelope the legs in flannel.

From this time she recovered rapidly, so as to be enabled to sit up in a few days.

The above case may, I think, prove serviceable, by pointing out the propriety of following up inflammatory disease through all its shiftings and turnings, and with so sturdy an enemy, waging nothing short of a warfare of extermination. *(Med. Repos.)*

City Terrace, City Road,
Nov. 18, 1823.

On Lupulin, as a Medicine. By Nicholas Mill, *Esq.* [*From the Annals of Philosophy.*]

"Sir,—Having noticed in an American journal the experiments of Dr. Ives, at New York, on the annon hop, and which appeared to me of considerable importance in medicine, I was induced to extend those inquiries, and apply the result, if beneficial, to practice among my own particular friends.

"Preparations of the hop have been occasionally used in medicine in this country. The whole of the plant has usually been employed to form a tincture, but from the extraneous matter introduced by this means, it has doubtless rendered this medicine inert, if not prejudicial. Dr. Ives discovered that the true aromatic bitter of the hop resided solely in a pulverulent matter, which he called lupulin, for the collection, preparation, and administration of which I am about to give specific directions.

"Take any quantity of the best hops, and rub them strongly between the hands, or put them in a bag, and beat them for some time; when the beating is completed, throw them on a coarse wire sieve, which will only suffer the dust, &c. to pass it; let them be well rubbed on the sieve till every thing has gone through, except the leaves and stems of the plant; reject the leaves and stems altogether, and sift what has already passed the wire through a lawn sieve; nothing will now pass but a very fine powder, resembling red sand: this is the lupulin in which the whole virtue of the hop resides.

"The preparations of this substance, which I have found to be most efficacious, are the decoction and tincture.

"The decoction may be made by putting a sufficient quantity of lupu-

lin into a Florence flask, in a sand heat, and filling it three parts full with distilled water; boil the whole for half-an-hour, and strain through cotton cloth. The solution thus obtained will be feculent, and does not become clear by repose; add, therefore, while hot, a small quantity of solution of gelatine in hot water; shake the whole together, and let it remain till cold, then filter through paper, and a clear yellow liquid will be obtained. It is intensely, but not unpleasantly bitter; and, when administered in doses of a tea-spoonful at a time in a table-spoonful of cold water, is a true stomachic. It is tonic, narcotic, and aromatic. It does not produce constipation of the bowels as almost all other tonics do. It appears to act entirely on the nervous system, and may be prescribed with manifest advantage in all cases of debility and inaction of the digestive organs, where powerful tonics would be injurious.

"The tincture may be prepared by digesting the Inpulin in *strong and warm alcohol*, till saturated, when it must be filtered through paper, and a deep-red solution will be obtained.

"From 40 to 60 minims of this tincture act as an anodyne, and have a powerful effect in allaying great nervous irritation; and that stupidity which often accompanies the use of opium, is never induced by this medicine.

"I am, Sir, your obedient servant,

"NICHOLAS MILL."

Bridge Cottage, Camberwell, Nov. 20.

Treatment of Lacerated Perineum.—By Dr. CAMPBELL, *of Edinburgh.*

In this injury "Two modes of treatment have been recommended —first, to bring the lacerated surfaces into apposition, merely by securing the limbs together; and, secondly, to place two or three stitches in the perineum, and secure the limbs. A practitioner, who is at all acquainted with the changes which the external parts undergo, owing to their enormous distention during the expulsion of the fœtus, would scarcely think of recommending the perineum to be stitched; for the great relaxation consequent on such distention, should present to him a prospect of the parts cohering by merely bringing them into contact, without adding to the sufferings of the patient by an unnecessary operation, and wounding her feelings by an indelicate exposure. From the result of several cases, I am justified in saying, that, in recent accidents of this kind, sutures are not required. The removal of the urine and fæces are points which require particular care and management. The former should be drawn off by the catheter at regular intervals, and the latter removed, by some contrivance which will not require much exertion on the part of the patient. With regard to the state of the bowels, it was at one time the opinion of some, that it would be advisable to induce constipation, in order to prevent the patient from being obliged to exert herself; but experience proved the absurdity of this notion, because the efforts required for the expulsion of indurated fæces were found to derange the process of adhesion, and prevent reunion. On these grounds, therefore, our practice will be much more successful by keeping the bowels, if any thing, rather open; but by no means to occasion an actual purging, for fear of producing too much action and irritation of the parts which are the seat of injury. I have found, that in the cases under consideration, the free use of the subacid fruits will keep the bowels in a proper state. When

laxatives are required, they should be exhibited in limited doses. To favour the approximation of the parts, the patient should be recommended to lie as much as possible on her side in bed.

"In chronic examples, on the other hand, of which I have had little experience, I do not think that stitches can be always dispensed with, however painful and indelicate the practice may be to the patient. With one exception, however, I have always succeeded in causing a reunion, by securing the limbs above the knees, by means of a common roller; keeping the wound clean, by changing the cloths applied to the external parts sufficiently often; ablutions daily, with an astringent lotion in a tepid state, such as formerly recommended; and placing a piece of dry lint over the wound after each ablution.

"In chronic cases, where an attempt is made to obtain a reunion of the divided parts, the callous margins must be pared, or rendered raw by the application of caustic; and as they have had time to contract or recover their tone, some expedient must be resorted to, in order to bring them together, on which account I consider the use of sutures indispensable. An operation similar to that performed in cases of hare-lip has also been advised in the injuries embraced by the present remarks; and the ingenious Smellie put it to the test of experiment in one instance, but without success. I still think, however, that this expedient merits further trial: for the failure of a solitary instance does not justify us in rejecting the practice altogether." *(Edinr. Med. and Surg. Jour.)*

Dr. CHISHOLM'S *Case of obstinate Obstruction of the Bowels.*

"I was desired, by my friend Mr. Beet, surgeon, at Ashford, to meet him at the house of Mr. B., distant about four miles from Ashford, on the 28th of August, 1822, late at night. I found the case to be obstruction in the bowels. The usual means were resorted to with considerable energy, viz. blood-letting, warm baths, purgatives, enemata, &c. &c. but without affording relief. On the 29th, the obstruction still continued, and the above plan, to its fullest extent, was again tried, but without effect. On the 30th, I found, on visiting Mr. B., that the extremities were cold, and that stercoraceous vomiting had come on. As I had considered the case from the beginning to be one of *introsusceptio*, I desired that a strong solution of the common yellow soap should be prepared; of this tepid solution *more than a large wash-hand basinful* was gradually, but perseveringly thrown up, by means of *Read's ejecting machine*, and retained, by applying napkins to the anus, as long as the patient could bear the distention, which resembled that of ascites or nymphanites. When the latter part of the injection came away, we had the gratification to find it tinged and mixed with stool. The patient shortly after passed wind and a motion; all the bad symptoms vanished, and he was well in three days. I have had many other cases where Read's machine was of infinite service, and I think every medical practitioner should have one in his possession."

Canterbury, 22d November, 1823.

HEADS *of* SURGICAL LECTURES, *delivered by* SIR A. COOPER, Bart., *at* ST. THOMAS'S HOSPITAL.

(Hydrocele concluded from page 42)

"While the injection remains in the tunica vaginalis, the patient will complain of a good deal of pain; he will at first feel as if the testicle was squeezed; then he will feel the pain

running along the spermatic cord—at the spinous process of the ilium, and at the loins where the spermatic plexus of nerves arises, and lastly at the neck of the bladder in the course of the vas deferens. The pain will be greater or less in proportion as the patient is more or less irritable. It is to be observed, however, that the degree of subsequent inflammation is generally in the inverse ratio of the pain suffered at the time of the injection. When there is no pain there will generally be a considerable degree of inflammation; on the contrary, when much pain is felt, it is generally the effect of nervous irritability, and little inflammation follows it.

"I have been under the necessity of bleeding and giving large quantities of opium to a patient in consequence of the severity of the pain produced by injection—still no inflammation was produced. It may be said that this was in consequence of the bleeding; but this was not the case: the pain arises from irritation in the nervous rather than in the vascular system, and inflammation does not readily follow it.

"When the fluid has remained five minutes and the canula withdrawn, there is no occasion to apply any thing to the part, and the patient may walk about as usual in the course of the day, if he feels but little pain. Should he, however, feel much pain, tell him to lie down and take his dinner that day, and a glass of wine after it, if he has been in the habit of doing so. After a few hours have elapsed, inflammation will probably come on. Above all, tell your patient to come the next day, that you may ascertain whether the inflammation, which is necessary for the cure of hydrocele, has been produced. If it has not, you must not despair of producing it. Take the part in your hand, and touch it here and there until the patient feel a good deal of uneasiness; then desire him to take a long walk, and an additional quantity of wine after dinner. In this manner you will generally succeed in producing such a degree of inflammation as will be sufficient to effect a cure. It sometimes, however, happens, that the injection will act so violently as to produce suppuration, particularly in constitutions disposed to inflammation. When there is danger of this, which may be ascertained by the great pain and redness of the scrotum, make an incision with a lancet into the part and discharge the contents, and if the opening so made be not large, the cure will be effected by the adhesive process. There are instances in which death has followed, and where life has been endangered by these consequences.

"This disease may be defined as a collection of water in the spermatic cord, and the part at which hydrocele of the spermatic cord takes place is in the tunica vaginalis, between the testicle and the abdominal ring, sometimes extending above the ring, and, on this account, not unfrequently mistaken for inguinal hernia. But the nature of the tumour may be known by pressing your finger along the parts until you have passed the abdominal ring, by its blue and semi-transparent appearance, by its being entirely unattended with pain, and by its not running into the abdomen like inguinal hernia.

"The best mode of treating this disease, is to make an incision into the tumour, (an injection in this situation would be both difficult and dangerous,) and to introduce your finger to ascertain if there be a communication with the abdomen, and then to introduce a small quantity of flour, to induce a slight inflammation internally. In this manner the cure of hydrocele of the

spermatic cord may readily be effected.

On introducing the Probe and Catheter into the Eustachian Tube by the Nostrils. From BUCHANAN'S ACCOUSTIC SURGERY, *pp.* 38.4*to.*

" Before you attempt to introduce the probe or catheter through the nostril into the Eustachian tube, it would be adviseable to make the experiment on the dried preparation, and then, if possible, on the recent subject, when you could give it the necessary curvature, preparatory to its introduction into the *living subject*.

" The experiment ought to be made on the same nostril and ear of the preparation or recent subject, as that on which you intend to operate. When the probe is just entering the mouth of the tube, the operator ought to mark it slightly in a line with the top of the nose, and from this mark measure off the length of the tube outwards, and mark it likewise.—These measurements will be of great use when you operate.

" It would likewise be adviseable to keep several probes ready curved and marked, some for the *right* and others for the *left* ear; and they should be of various assortments, to suit the age or size of the head of the patient. The great difficulty of introducing the probe into the Eustachian tube through the nostril, is the excessive irritability of the Schneiderian membrane with which it is lined.

" To overcome the disagreeable sensation produced by the introduction of foreign substances, it might be adviseable to inject tepid water into the nostril, and at the same time dip the probe into ol. amygd. warmed to the temperature of the blood. I have used this mode frequently with great success, causing little or no irritation to the patient.

" Having got the patient seated conveniently, introduce the probe into the nostril, and when you approach with the first mark towards the tip of the nose, cautiously endeavour to find the mouth of the tube, by directing the knob on the end of the probe outwards, and rather upwards, until it has entered the labia.

" Having entered the tube, observe the distance of the second mark, and proceed in the same manner until it is in a line with the tip of the nose, and feeling no resistance made to the probe, you may conclude that it has entered the tympanum.

" But beware of farther introduction; for, by rashly pushing the probe into the tympanum, you might injure the mechanism of the ossicula auditus, which, besides putting your patient to great pain, would throw discredit on the operation.

" If you wish to inject tepid water into the tympanum, provide a slender silver catheter, marked and curved similar to the probe, which should not exceed in diameter from the point to the first mark, that of the diameter of the knob of the probe.

" It should gradually increase in size from the first mark, for about a quarter of an inch in length, to the thickness of a crow-quill, and then be of an equal diameter to the end. This equal portion of the catheter to be made with a male screw on the outside, to fit a round flat piece of silver, with a female screw in its centre.

" This flat piece of silver, which has been called a frontlet, ought to have five or six holes in its edges, so that it may be secured in a proper position, by means of a ribbon passed round the head and through two of the holes of the frontlet, the ends of the ribbon to be then brought backwards and tied behind; or an

assistant might prevent the catheter from slipping into the tympanum, and at the same time secure the head of the patient during the operation."

PATHOLOGY OF THE SPLEEN, *from the Quarterly History of the Medical Sciences.*

"Even at this day, the office of the spleen is so little known, that perhaps every fact concerning it, however inconsiderable, is deserving of attention. On this account, the following case of enlarged spleen has been summarily drawn up, and accompanied by a few brief remarks:

"*Case.*—A mongrel, the offspring of a Newfoundland dog and a pointer bitch, in the seventh year of age, had, for the two years previous to his death, been troubled with a cough, which was aggravated by running. Within the last three or four weeks of his existence, the cough disappeared, and left behind it a wheezing and breathlessness, much increased by any thing that agitated him, and after that he was hardly ever able to lie down; and if he chanced at any time to fall asleep when in a sitting posture, he often fell, but instantly sprung up again. His body had become emaciated, his eyes dim and large, and his countenance old-like and withered; his feet and legs inclining to swell; his abdomen hard and tumid, and more so after eating, particularly on the left side; appetite continued, but he ate sparingly and often; his sight and smell were imperfect, but his hearing as quick as ever. From stupidity he had lost all idea of cleanliness. His stools latterly were thin and bilious; his breath was fœtid; his urine at times plentiful. His size was that of a pointer. In this state he was hanged. On laying open the thorax, the lungs and heart were found swimming in water. In some places the former were hard and swelled, and glued to the left side and to the diaphragm, and when cut open showed a whitish substance resembling white or yellowish dry rotten wood. One lobe was of a dark or purplish colour, and as firm as a piece of liver; but in other parts the lungs were not diseased. The heart was in its natural situation, and of its usual size. Close to it, on its left side, was a whitish bag, of the same size as the heart, which had an elastic feel, and evidently contained a fluid. On making a small opening into it with a scalpel, a fluid, like yellow serum, sprung out to the distance of two feet, and on laying this bag open its inner sides showed an incrustation, in appearance like yellow rotten wood, only finer in its grain. Not a drop of water was contained in the abdomen. The liver, the intestines, and kidneys were quite sound. The stomach bore a great resemblance to the colon, being long and narrow. The gall-bladder contained hardly any bile. The spleen was prodigiously enlarged, and in appearance five times the size of a cow's. It was quite solid, and of a dark red colour, seeming to contain nothing but blood-vessels, immense in number and of very small size. The vessels that supplied it seemed to be of their natural size. It covered the whole surface of the intestines, and seemed to be in a state of rapidly progressive enlargement. It was thought that this dog's complaints were occasioned by his being obliged to lie all night in a cold damp out-house, after having been always accustomed to a warm dry lodging. When the disease was still in its infancy, he was removed to a better situation, yet it continued its progress.

It would seem from this, that the enlargement of the spleen had some connection with the diseased state of the stomach; in short, the spleen

seems to have been a diverticulum for receiving that blood which could no longer be admitted into the vessels of the stomach. At other times, when the spleen resists enlargement, the vessels of the stomach give way, and hæmatemesis ensues. I have seen several cases of elderly people which I suspected were of this nature. Diemerbroeck thinks, that when the liver is any way obstructed, there may be a retrograde motion of the splenic vein, by which its blood may be emptied into the stomach by the vasa brevia, or into the intestinal canals by the meseriac veins; and, on the contrary, when the blood does not find an exit in those ways, it will distend the spleen itself. In a case of diseased or schirrous spleen, Diemerbroeck saw three chamber-pots full of an ink-like fluid passed by stool. Many of the ancient authors have spoken of a connexion betwixt the stomach and spleen, and the same thing has been adverted to by some late German authors. It would be an easy matter to collect notices on this subject from books; but the investigation would be rather pedantic than useful.

Since the publication of Mr. Hutchinson's book on Neuralgia, the fame of the carbonate of iron has increased rather than diminished. We had all along intended to make some extracts from the work in question, but the almost every-day occurrence of cases, with the profession generally, with whom Mr. H.'s book is as well known as the Pharmacopœia. We shall, therefore, extract the following case taken from a quarterly journal,* in the discharge of our first intention; at the same time, we do not hesitate to say, that Mr. Hutchinson deserves well of his country, as much for his philanthropy, as his disinterestedness, in publishing his discovery for the benefit of mankind in general, without being influenced by those sordid views with which many are actuated, who deal less liberally either with the profession or the public.

Neuralgia, or Tic Douloureux, treated with Carbonate of Iron.—By Dr. Crawford, *of Bath.*—"Dr. Crawford, of Bath, has communicated the particulars of two cases of neuralgia treated with the remedy in question—one in his own practice, the other in that of Dr. Davis, of Bath. The first case was that of a lady, who became affected in the left side of her face, at the age of 69 years. The disease was moderate at first, and the intervals between the paroxysms of considerable extent; but after some time the disease became greatly exasperated, and the cessations from suffering of short duration. The complaint was subdued by the arsenical solution, and the patient remained free from suffering for two years. Then a slight relapse, and again relief for four years by the same remedy. At the end of this period the enemy renewed his attacks, but arsenic no longer availed. Dr. Crawford then commenced with carbonate of iron, in scruple doses three times a-day, gradually increasing the dose to a drachm. In three weeks from the commencement of this plan of treatment the disease gave way, and has not yet returned."

"Dr. Davis's patient was also a female, 65 years of age, affected with the diseases in the right-side of the face. She was cured by the carbonate of iron in a fortnight—two scruples night and morning."

"Mr. Thompson, of Sloane-street, has communicated to Mr. Hutchinson the particulars of some cases

* Medico-Chirurgical Review.

which are in favour of the remedy. We sincerely hope it may retain the reputation it has already acquired."

Anatomy of the Fascia Superficialis.—By Dr. J. D. Godman.*—The anatomy of fasciæ seems to be the least precise in the whole science, though it is of very great importance in many of the operations of surgery, and also in the discussions of physiology.—Many pupils indeed revolt from the study of fasciæ, despairing of understanding it. We are therefore much indebted to Dr. Godman for the manner in which he has taken up the subject, and hope it will lead others to pursue similar investigations. According to Dr. Godman, the fascia superficialis covers, with more or less degrees of firmness and thickness, the whole trunk of the body, anterior as well as posterior, together with the thighs, till it is lost in the fascia musculorum, just above the elbow. We shall give a short specimen of Dr. Godman's details.

"As we approach the os pubis, near which it covers the spermatic ring and cord, the handle of the knife may be used to separate it from the tendons reflecting it, we obtain the fairest view of the real character and situation of the spermatic cord. The fascia receives a very considerable thickening near the pubes from the lamina of cellular substance exterior to it—and it is continued over the corpora cavernosa penis, as well as sends down a strong sheet into the scrotum, which has received the name of Camper's ligament. This portion descends obliquely in the direction of the cord, which it covers, and of the testicle which it surrounds. The external portion passes downwards, over the whole of Poupart's ligament to the upper part of the thigh, lying immediately under the integuments, and over the cluster of lymphatic glands and vessels, which fill up the depression below Poupart's ligament.—We may next raise the fascia superficialis from over the crest of the ilium, and pursue it backwards to the spine, and we may follow it downwards covering the whole of the gluteal muscles, and across covering the whole perineum.

"The platysma myoides is on the outside of the fascia, and in immediate contact with the integuments."

The fascia superficialis covers "the whole of the neck ascending in front of the edge of the chin, where it is lost.—As we pass towards the angle of the jaw, we find it rising higher—and extending towards the ear, so as entirely to overlay the parotid gland." At the posterior edge of the sterno-cleido-mastoideus it splits into two portions, "thus the muscle is inclosed in a distinct sheath, the same fascia forming both the deep and the superficial covering of the neck."

We do not vouch for the accuracy of all this, as Dr. Godman has a system to support, and may be, as is usual, unduly biassed; but it is a subject certainly well worthy of investigation.

* Philadelphia Journal, No. 12.

SCIENTIFIC INTELLIGENCE.

ASSOCIATION FOR THE PURPOSE OF WORKING THE MINES IN MEXICO.

This association was formed by some of the principal bankers and merchants, with a capital of one million sterling, to be applied for the purpose above stated, divided into 10,000 shares of 100*l.* each. It should appear from the prospectus, that such mines only have been chosen as have been already worked, and those too of the first importance; there will, therefore, be no such risks attending this speculation as is usually associated with mining. The parties have, of course, taken every precaution in regard to the protection of the government and the proprietorship. We refer to the prospectus itself for particulars, which may be had of any of the directors.

It has been a source of the greatest regret to enlightened men, that the riches of the world should ever have been deposited in the hands of the Spaniards, whose national character is imbued with so much lethargy and supineness—the great enemies to the advancement of mankind. The revolution which will now take place in that hitherto inhospitable land,

will be a fresh source of wealth to Europe, and a sure road to the improvement of the Mexicans themselves.

It is almost impossible to calculate on the advantages likely to be derived by this company from the arrangements they appear to have made, for what may not be expected from British capital, enterprize, and genius, in an almost primitive land, in which the precious metals are distributed with so lavish a hand.

To convey an idea of the ignorant and slovenly manner in which mining, as well as all other processes, have, in most instances, been conducted in Mexico, we shall give to our readers a few anecdotes and observations, which almost border upon the ludicrous.

When the ore is dug it is conveyed to the surface of the earth, either on the backs of men, called (tenatores) beasts of burden, or in leather bags. The tenatores may well, indeed, be called beasts of burden, for they frequently remain laden with a weight *of 225 to 350 pounds for* a *space of six hours*, exposed to a temperature of from 70 to 77° Fahrenheit. (A London porter would pronounce this impossible.) And, during this time, they ascend and descend several thousand steps, in pits of an inclination of 45°. To prevent their shoulders from being hurt (for the miners are generally naked to the middle), they place a woollen covering under this bag. We meet in the mines with files of 50 or 60 of these porters, among whom there are men above 60, and boys of 10 or 12 years of age. In ascending the stairs, they throw the body forwards and rest on a staff, which is generally not more than one foot in length. They walk in a zigzag direction, because they have found, from long experience (as they affirm) that their respiration is less impeded when they traverse obliquely the current of air which enters the pits from without. The leather bags are used either for drawing up the ore or the water—these bags are attached to ropes, which are drawn by horses; they seldom last more than eight or ten days, being destroyed by friction against the sides of the shaft. A bag full of water weighs about 1250 pounds, which is the work of *eight horses* to draw to the surface. Instead of stopping the course of subterraneous streams, and conveying the water to pits to be drawn off by machinery, they frequently direct it to the bottom of the mine, and at leisure withdraw it, at an immense expence, by the method above described. Neither pump, engine, or railway, is used by the miners. The immense wealth accumulated by individuals, notwithstanding such barbarous management, is scarcely credible. The former proprietors of the mine Valenciana, which this company have now acquired, were amongst the richest individuals in the whole world, and they drew their wealth from this mine in a very few years. The following is their history.

For a whole century this mine was deserted, until 1760, when a Spaniard, who went over very young to America, began to work this vein, in one of the points which had, till that time, been believed destitute of metals. M. Obregon, the name of this Spaniard, was without fortune; but as he had the reputation of being a worthy man, he found friends, who, from time to time, advanced him small sums to carry on his operations, and yet the expenses greatly surpassed the value of the metallic produce. With a passion for mining, equal to what some display for gaming, M. Obregon preferred submitting to every sort of privation to the abandoning his undertaking. In

the year 1767 he entered into partnership with a petty merchant of Rayas, of the name of Otero; could he then hope, that, in the space of a few years, he and his friend would become the richest individuals in Mexico, perhaps in the whole world? In 1768 they began to extract a very considerable quantity of silver minerals from the mine of Valenciana. In proportion as the shafts grew deeper they drew from the "*Pertinencia de Dolores*" enormous masses of sulphuret of silver, mixed with native and red silver. From that period till 1804, the mine of Valenciana has continually yielded an annual produce of more than 583,380*l.* sterling. There have been years so productive, that the net profit of the two proprietors of the mine has amounted to the sum of six millions of francs. M. Obregon, better known by the name of Count Valenciana, preserved, in the midst of immense wealth, the same simplicity of manners, and the same frankness of character for which he was distinguished previous to his success, when he began to work the vein of Guanaxuato, above the rabin of San Xavier, goats were feeding on the very hill which, ten years afterwards, was covered with a town of seven or eight thousand inhabitants. Since the death of the old Count, and his friend Don Pedro Luciano Otero, the property of the mine has been divided among several families; the two younger sons of M. Otero, each possessed, in ready money, a capital of six millions and a-half, without including the actual revenue from the mine, which amounted to more than 16,600*l.* sterling.

HOSPITAL REPORTS.

Guy's, *Jan.* 23.—The operation for tying the carotid artery was performed here this day, for aneurism of the vessel, by Mr. Key. It was rendered tardy and tedious, occupying upwards of an hour, in consequence of the diseased state of the artery, which had varied much from the original relative position.

All the Surgeons of the United Hospitals were present, with the exception of Sir A. Cooper, Bart., and the crowd of pupils was immense. The patient, we are informed, is as well as can be expected

Amputation at the Hip-joint.—This case is going on well—the patient is gaining strength, and in high spirits—the ligature has not yet come away—but a healthy pus, from the circumjacent parts, &c. forebode a successful result to the operation.

[*In the* new series *to this journal, a condensed view of* Hospital Practice *and* Occurrences *will be given Monthly; wherein cases only of more than ordinary importance will meet with attention; and gentlemen, on the spot, are already engaged at the various establishments of the metropolis, to forward us reports as these may occur, &c. &c.*]

MELANGE.

Preparation of Veratrine.—"They repeatedly digested the seeds of the *veratrum sabadilla* in boiling alcohol. These tinctures, filtrated whilst almost boiling, deposited, on cooling, whitish flakes of wax. They re-digested the matter which remained dissolved, after evaporating it to the consistence of an extract, in cold water: a small quantity of fatty matter now remained on the filter. The solution was slowly evaporated, and it formed an orange yellow precipitate, which possessed the characteristics of the colouring matter found in almost all the woody vegetables. On adding a solution of acetate of lead to the liquor, which was still deeply coloured, a new and very abundant yellow precipitate was immediately formed, which was separated by means of the filter. The liquor, now nearly colourless, still contained, amongst other substances, the acetate of lead, which had been added in excess: a current of hydrosulphuric acid was used to separate the lead. The liquor was then filtrated and concentrated by evaporation, was treated by magnesia, and again filtrated. The magnesian precipitate was digested in boiling alcohol. The alcoholic liquors gave, on evaporation, a pulverulent substance, which was extremely acrid, and possessed all the properties of the alkalis. This substance was at first yellowish; but, by solutions in alcohol, and subsequent precipitations, caused by pouring water into the alcoholic solutions, it was obtained in the form of a very white and perfectly inodorous powder."

Tetanus, treated with Oil of Turpentine. By B. Hutchinson.—Mr. Hutchinson has stated a case of tetanus occurring without

any evident cause, in a man long afflicted with epileptic attacks. He was a prisoner in the Nottinghamshire House of Correction. Mr. Hutchinson finding, on his visit one morning, that the patient presented most of the usual phenomena of tetanus, he abstracted thirty ounces of blood, and exhibited fifteen grains of calomel and two grains of opium. Next was administered a brisk purgative enema, containing one ounce of the oleum terebinthinæ, while a blister was applied to the back. The enema taking no effect, half an ounce of turpentine was ordered by the mouth every two hours. Next morning our author was agreeably surprised to find that the patient could open his mouth, and that the whole of the tetanic symptoms were dispersed. He had taken, in all, two ounces of the turpentine, which freely evacuated his bowels. We would hint our suspicion that the case was not one of real tetanus, from the great facility with which the symptoms gave way. However this may be, we have nothing to object to the mode of treatment employed.

On the Influence of the Nervous System on Digestion. By MM. Breschet, H. Milne Edwards, *and* Vavasseur.—In an interesting *Mémoire* by these gentlemen, lately read before the *Société Philomatique* of Paris, several experiments are detailed, which were instituted for the purpose of investigating the influence possessed by the nervous system on the functions of digestion: the following are the conclusions deduced, which, it will be observed, differ but little from those at which Dr. Wilson Philip had previously arrived:

1st, Simple section of the two pneumogastric nerves in the region of the neck, without loss of substance, and without separating the cut extremities, does not prevent digestion from taking place, but merely retards it in an evident manner.

2dly, Section of these nerves, with loss of substance, diminishes considerably, and much more than simple section, the digestive action of the stomach, but it does not appear to abolish it completely.

3dly, Section or destruction of a part of the spinal marrow, or ablation of a portion of the brain, acts in the same manner on the changes which the food undergoes in the stomach.

4thly, Narcotics, administered so as to produce coma, equally diminish the energy of the digestive powers.

5thly, It results, consequently, that every thing which diminishes the amount of nervous influence, transmitted to the stomach, weakens the digestive action.

6thly, and finally, When digestion is almost completely suspended by the section, with loss of substance, of the pneumo-gastric nerves, the digestive action of the stomach may be re-established, and the food contained therein be converted into chyle, by means of the galvanic influence, with almost as much rapidity, and as perfectly, at least in appearance, as under ordinary circumstances.—*Archives générales de Médecine*, Aout, 1823.

A new Remedy for excessive Salivation.—Dr. Kruger-Hausen, of Gostrow, has given an account of a man who, during a state of excessive salivation, attended with hæmorrhage from the gums, had employed the usual astringent gargles without effect; who afterwards covered his tongue and inside of his mouth and fauces with tar, by means of a brush. He soon afterwards recovered, without any other remedy. Mr. K. has since employed the same mode in several cases, with the effect of quickly removing this disagreeable consequence of medical treatment, without any inconvenience resulting from this new method.—*Rev. Méd.* Juillet, 1823.

Physiology.—M. Sergelas has communicated to the Academy the result of experiments which not only confirm generally the absorbent faculty of the veins (doubted by some physiologists,) but prove that certain substances are absorbed only by the veins, or at least, that they are so in greater abundance and more rapidly, than by the lacteal vessels. Various other able physiologists have been investigating different parts of the animal system, especially the nerves; but the description of their labours would be rather too technical for our general readers.—*Acad. des Sciences.*

Comparative Anatomy.—M. Geoffry Saint Hilaire's investigations on the subject of monstrosities, has led him to extend his researches to the organs of generation of birds; as well as in those of the monotremes, those extraordinary quadrupeds of New Holland, which unite the beak of a bird with the shoulders of a reptile, and respecting which it has hitherto been doubtful whether they are oviparous. M. Geoffry Saint Hilaire determines that they are so.—Messrs. Majendie and Desmoulins have been engaged in similar investigations concerning the lamprey.—*Ibid.*

MARRIED.—On the 26th inst. at St. Pancras' Church, S. Plombe, Esq. Surgeon, of Russel Street, to Miss Emma Lloyd, of Clapton.

DIED.—On the 22d inst. at Exeter, John Henry Beaumont, Esq., Surgeon to the Forces.

On the 26th inst. in Percy-street, James Hervey, M. D. Fellow of the Royal College of Physicians.

On the 27th inst. at the Surrey Dispensary, Southwark, at the early age of 28, Mr. Benj. Huggett, late Apothecary to the Institution.

ADVERTISEMENTS.

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NOTICE OF A NEW SERIES.

IN consequence of this Magazine having passed into other hands, the present Proprietors beg leave to announce that, henceforward, it will be published Monthly, that is to say, on the 10th of each month; (to contain 96 close printed octavo columns, in a neat wrapper, price 1s. 6d.) under the name of the MONTHLY MEDICO-CHIRURGICAL REVIEW, AND CHEMICO-PHILOSOPHICAL MAGAZINE.

The Proprietors having selected and engaged gentlemen of known and acknowledged literary and professional talent for the several departments of the above work, hope to be enabled, *Monthly*, to lay before their readers, a condensed and connected summary of all that is valuable and worthy of record in the Medical, Surgical, Chemical, and Philosophical world in general. Their labours, then, will principally consist in impartial reviews of the most recent, interesting, and important subjects, connected with the above branches of science; among which, will be comprised, the essence of the Monthly and Quarterly periodicals, foreign and domestic—the progress of Medicine, Surgery, Chemistry, and the Arts—Biographical Sketches of Eminent Scientific and Professional Men—select Miscellaneous matter, adapted to all classes of polite readers, &c. &c. With these various objects in view, the Proprietors hope, that a publication of this description will meet, from an enlightened and generous Public, that patronage and encouragement which, from the talent employed in the arrangement of its several departments, they are entitled to look forward to with some degree of confidence.

To be brief, they the more readily anticipate success in their undertaking, not from the varied character of the work alone, but from the determination they have formed to conduct it with vigour, spirit, and fidelity. Their pages will at all times be open to liberal controversy, but they will never permit them to be sullied by personal invective, illiberality, or abuse.

Contributions will be readily received, which are consonant with the views of this prospectus; and young and diffident authors will meet with that support, which is but too often withheld from them.

To the Medical Profession, the earliest and most correct practical information on all subjects connected therewith, either at home or abroad, will be communicated; and, for this purpose, a sufficient portion of our columns will invariably be devoted. Under this head will be embraced, the most striking occurrences of the different hospitals and other public institutions of the same nature. In our pages, the lovers of the Sciences, the Fine Arts and Polite Literature, will meet with a varied selection of interesting matter for their amusement, and information—and the general reader will find much to add to his already acquired stock of knowledge.

The first number of the NEW SERIES of the MONTHLY MEDICO-CHIRURGICAL REVIEW, AND CHEMICO-PHILOSOPHICAL MAGAZINE, will, as previously stated, appear on the 10th of March; until then, we beg leave to solicit a continuance of the favours of those gentlemen, in different parts of the country, who, hitherto, have countenanced the original design. In the meantime, COMMUNICATIONS, ADVERTISEMENTS, and ORDERS, are requested to be addressed to the Publishers, SHERWOOD, NEELY, and JONES, PATERNOSTER-ROW, &c. &c. &c.

Further particulars, &c. will be duly announced, through the medium of the Public Press, as well as by prospectuses, &c.